

Part I GENERAL AND HISTORICAL

CHAPTER I

INCENTIVES TO LEARNING

It has become fashionable to disapprove of examinations as a means of stimulating effort in children; to regard their influence on school work as necessarily vicious; and to suppose that their only legitimate function is the selection and classification of children after they have passed through some part of the educational machine. This fashion is unfortunate. Examinations fulfil a double function—they are a mobilising force in education, and they provide a means of testing its results. To ignore either of these aspects is to get a distorted view of the whole subject. In this chapter the unfashionable and neglected view of examinations, that is, their helpful effects on students and teachers, will be considered with the help of a few examples.

EXAMINATIONS AND THE INDIVIDUAL STUDENT. The stimulating and mobilising power of examinations affects teachers, schools, textbooks, and administration, but it is exerted through the medium of the individual student. Our first task, therefore, in analysing the factors contributing to such stimulation is to consider the effect of examinations on the individual student.

As an example of the process of learning, which is one of the foundations of education, let us consider a child learning to ride a bicycle. In some ways this is an example of a special kind, because it concerns the training of the body and senses rather than the mind. Perhaps this enables us to view it with more detachment than we can bring to bear upon the process of learning a more purely mental accomplishment, such as solving equations in algebra, understanding the principles of digestion in biology, or appreciating the significance of a Shakespeare play. However that may be, this example brings out clearly some of the essential characteristics of all learning.



INCENTIVES TO LEARNING

A striking feature about learning to ride a bicycle is that, while a certain amount of instruction may be helpful, success is almost entirely the result of practice. You can read books on bicycling, receive advice from your friends, or watch other beginners learning to ride, but nothing can take the place of getting on, and falling off, a bicycle. We learn to do things by doing them. The eyes, brain, and muscles acquire new habits by continued practice. The same principle underlies learning to play the piano, to do mathematics, to master a foreign language, to understand chemical equations, or to write and speak effectively. In fact, in every branch of education, practice makes perfect. But regular practice requires concentration, determination, and effort. This effort is only forthcoming when the student is convinced that the benefits to be obtained will be worth the effort expended. The benefits of being able to ride a bicycle are obvious and easily realisable. For this reason, most children and many adults have been able to master this quite difficult accomplishment without any special inducements.

We are apt to take for granted some of the most striking successes of education. It is a remarkable fact that nearly the whole population learns to read with so little fuss, and in spite of much comparatively unskilled teaching. And this does not apply only to the young. In Russia, large numbers of old people have learnt to read during the last ten or fifteen years. It seems that, given reasonable assistance in the form of reading-books and teachers, and plenty of reading matter which they want to be able to understand, children learn to read almost as easily as to walk. But it must not be thought that these new skills are acquired without considerable perseverance and effort.

The two points I wish to emphasise are, first, that learning is mainly a matter of practice requiring continued effort, and, secondly, that this effort is forthcoming when the benefits accrue continuously and progressively as greater proficiency is reached. The more directly and immediately you benefit from increased proficiency in the subject you are studying, the more



INTEREST AND DISCOURAGEMENT

3

your interest is kept up, and the more easily your will power summons the effort required. This condition for easily sustained effort depends as much on circumstances as on the subject. Suppose I wish, for some reason, to learn to write with my left hand. Normally, this is such a tedious proceeding that I am unlikely to keep it up with sufficient regularity to succeed. But, let my right hand become temporarily or permanently incapacitated and the whole situation is altered. It becomes a matter of urgency to develop at least a little skill, and each step of progress is amply rewarded. Many similar examples could be mentioned of the way in which a change of circumstances may enable people to learn with comparative ease what they previously considered to be difficult tasks. A blind man learns to read braille much more readily than a man with normal sight; a boy has less difficulty in picking up a knowledge of book-keeping in his spare time if he is employed in an accountant's office than he would have if his employment had nothing to do with accounts. Another example is learning a modern language. It is obviously easier to learn a foreign language in the country where it is spoken than in one's own country. The difficulties of learning French in England are well known to secondary school boys and girls, few of whom would attempt to tackle it by themselves; but let them be transported into French families in France for a few months, and they would soon learn to speak and even to write the language fairly correctly. Unfortunately, in present-day England, circumstances do not always come to the student's aid. More often, boys and girls have to learn in the face of unnecessary difficulties which make the benefits to be obtained seem slight or even purely hypothetical in relation to the effort required for continuous study or practice. This applies especially to children from poor, overcrowded homes.

Though learning and true education are achieved by continuous processes of activity directed towards a future goal, these processes divide themselves into stages. The child learning to ride a bicycle comes to a point where he may be discouraged. He has to pass from the stage of being assisted by someone else



INCENTIVES TO LEARNING

to the stage of entrusting himself to his own skill. Then perhaps a wise parent will help with the offer, 'I'll give you sixpence if you can ride as far as that lamp-post to-night without my help'. Although the parent may not realise it, this constitutes an examination. The child concentrates his attention on getting to the lamp-post, not for the moment because he wants to be able to ride a bicycle, but because he wants sixpence.

The success of an examination as a stimulus to effort depends on four factors: (1) a suitable reward for success; (2) a limited time; that is to say, the examination cannot be postponed indefinitely; (3) knowledge that the examination will be conducted fairly and honestly; (4) knowledge that it will be neither too hard nor too easy for the students who are to take it.

In our simple example of the bicycle, the reward is there; for the child knows from experience what importance he can attach to his father's promise of sixpence. The time element is present; for the task has to be performed 'to-night'. The standard is suitable; for if the test is too easy, the father will have given sixpence without any resulting benefit; and, if it is too hard, the child will consider the offer merely a joke. The examination is fair; for the father is present to see that there is no cheating, and there need be no argument as to whether the lamp-post has been reached or not. Let us turn now to a rather more complicated example of the use of an examination as a stimulus to the individual student, by considering an examination in English for a foreign student learning the language in England.

We will take for this example a member of one of the allied armies stationed in England who is unable to attend school or

We shall see later that an examination in the complete sense in which the word is used in this book should possess a further characteristic. It should be the gateway to further activity. If the father posed the question, 'I will let you come out for a bicycle ride with me at the week-end if you can ride to the gate, turn round, and come back to me without falling off', success in the examination would lead the child on to the new stage of 'going out for a ride'. The test is also partial because it is taken by only a single candidate; this leads to an arbitrary fixing of the standard by the parent.



INTEREST AND DISCOURAGEMENT

English classes, and who undertakes to learn English with grammar and phrase books and by trying continually to make himself understood in conversation. He soon achieves a certain degree of proficiency, enough to enable him to get along in everyday life without serious inconvenience to himself. For two reasons many foreigners never pass beyond this stage in learning English, although they may live permanently in England. First, the steps required to gain further proficiency involve serious study of the kind normally associated with academic education. Thus, the student must now give up more time to learning grammar; he must take steps to discover whether he is talking 'good English'; he must learn to write, as well as to speak and understand the spoken word, and this involves learning to spell. He must also study something of the literature and customs of the country if he is to take his place as a reasonably normal member of society. Secondly, the direct stimulus to effort becomes fainter at this stage. Although further steps towards proficiency bring with them the reward of a more complete intercourse with English people and perhaps possibilities of promotion or employment after the war, nevertheless the prospect of these benefits may be too remote.

Modern education employs many devices to help boys and girls through stages in which their wish to succeed is overlaid by discouragement at lack of success. Well-organised schools, highly trained and skilled teachers, scientifically graded syllabuses are examples of such devices. Although most of these aids are denied to the solitary student, a suitable public examination may be a great help to him. We will take as an example the examination for the Certificate of Proficiency in English conducted by the University of Cambridge. Papers are set in (1) translation from foreign languages into English; (2) translation from English into these languages; (3) English literature, customs, methods of government, etc.; and there is an oral examination in the spoken language. Any student can take this examination on payment of a comparatively small fee, and, if he is successful in passing, he will receive a 'Certificate of Proficiency'. In order to get a clear understanding of the



INCENTIVES TO LEARNING

part which such an examination plays in helping a foreign student to learn English, let us apply to it the four criteria of success already mentioned in connection with learning to ride a bicycle.

First, the reward for success must be sufficient. In this case the visible reward is a certificate, the real value of which depends upon its acceptance by potential employers, or institutions for further education, as evidence that the student has pursued successfully a serious course of study; that he has, in fact, become proficient by practice in doing certain things. Anyone offering employment to a foreigner who holds this certificate can be satisfied that he has written correct English, spoken with a reasonable accent, etc. A university accepting such a student knows that there is a good prospect that he will be able to profit from a course of further study. An examination is both the culminating point of a period of prolonged effort and a goal which presents itself to the student as the gateway to a promised land. A certificate is thus not so much a reward in itself as a link bringing into concrete relationship with the student the reward provided by future employment or educational possibilities; it is something worth possessing as a token of benefits to follow. There are, of course, many subsidiary reasons why children and their parents value examination certificates. Prestige and pride undoubtedly play a part, but are easily traceable to the real reputation of the certificate, which depends, in the long run, on the experience of those possessing it—on their success in obtaining with its aid the kind of work or further education that they seek.

This power of an examination to link one phase of a student's activity with a subsequent phase is important from the educational point of view. True learning results from activity which is directed towards a future aim as well as to an immediate purpose. This continuity of education is often obscured because we possess so few facilities for organised adult education. Training and education cannot be separated from life. Adults are doing things every day which form and modify their mental habits, and no sharp distinction can be drawn between



THE END IN VIEW

this process and education. Similarly, the child's schooling is also his life.

The continuity of experience, whether professedly educational or not, is discussed by Dewey in *Democracy and Education*, especially in Chapter VIII, 'Aims in Education'. Like many of Dewey's writings, this chapter is diffuse, and it is difficult to convey his sense by a single quotation. The following passage expresses enough for our purpose:

The aim must always represent a freeing of activities. The term end in view is suggestive, for it puts before the mind the termination or conclusion of some process. The only way in which we can define an activity is by putting before ourselves the objects in which it terminates—as one's aim in shooting is the target. But we must remember that the object is only a mark or sign by which the mind specifies the activity one desires to carry out. Strictly speaking, not the target but hitting the target is the end in view; one takes aim by means of the target, but also by the sight on the gun. The different objects which are thought of are means of directing the activity. Thus one aims at, say, a rabbit; what he wants is to shoot straight: a certain kind of activity. Or, if it is the rabbit he wants, it is not rabbit apart from his activity, but as a factor in activity; he wants to eat the rabbit, or to show it as evidence of his marksmanship—he wants to do something with it. The doing with the thing, not the thing in isolation, is his end. The object is but a phase of the active end—continuing the activity successfully. This is what is meant by the phrase, used above, 'freeing activity' [at p. 123].

The claim that examinations have a vital part to play in education is based on the assumption that success in the examination is not viewed or sought after as an end in itself. Hence the importance of regarding examinations as a link between two phases of activity, not merely as the end of one phase.

Most examinations provide various grades of success. The old Local Examinations of Oxford and Cambridge issued certificates in three classes of honours, as well as ordinary pass certificates. University Honours Lists are usually divided into three classes. In the individual subjects of many examinations

¹ John Dewey, *Democracy and Education*, The Macmillan Company, New York, 1930.



INCENTIVES TO LEARNING

'distinction' or 'special mention' is awarded to the student gaining high marks. These are all devices for increasing the reward for the better students, while, at the same time, giving an opportunity to the ordinary plodder to gain the certificate. The differentiation of certificates in this way ensures that the same examination provides a stimulus for a wide range of students. There has been criticism from time to time of the excessive competition thus created in some examinations. As a result of the Consultative Committee's 1911 Report, Honours and Distinctions were partially abolished in many public examinations, and ten years later completely abolished, but it is interesting to note that similar differentiation of certificates has since been reintroduced into the School Certificate Examination (see p. 108), and that Sir Michael Sadler has called attention to the beneficial results which followed the division of the Honours List at Oxford into two classes.¹

Secondly, the time at which an examination is to be taken must be fixed in relation to the student's course of preparation for it, and many practical considerations are involved. Some examinations take place once a year and may be taken by the same student as many times as he wishes. Others, such as the University Honours Finals at Oxford and Cambridge, can be taken once only; while other examinations, of which the London External Intermediate is an example, may be taken in portions on succeeding occasions. In the School Certificate Examination all subjects must be taken at one and the same time, and the candidate taking the examination on a second occasion is not allowed to count passes in subjects taken previously. Further,

¹ 'At Oxford, Cyril Jackson, Dean of Christchurch, John Eveleigh, Provost of Oriel, and John Parsons, Master of Balliol, were chiefly instrumental in passing in 1800 the new Examination Statute, which, in the words of the Oxford University Commission of 1850, "first raised the studies of the University from their abject state". By this Statute which made use of the principle of competition, the Honour List was divided into two classes in which the names were arranged in order of merit.' Sir Michael Sadler, Essays on Examinations, International Institute Examinations Enquiry, Macmillan, 1936, p. 60.



INTEREST MAINTAINED

the dates of such examinations as the Tripos at Cambridge, and the School and Higher School Certificate Examinations, are fixed by the termination of the university or school year, whereas no similar restriction limits the dates of such examinations as London Matriculation.

We are concerned here with only one aspect of this question, namely, its influence on the work of the students. A student works best if he knows that the date of his examination is unalterable, but some flexibility is desirable to cover the case of the student who may be compelled to alter his plans by forces outside his control. We find the most rigid system at the resident universities, where the student has three years to devote exclusively to study, and where the authorities are concerned to encourage him to make the most of this vital period. On the other hand, the London Matriculation Examination, whose reputation is no doubt due largely to the lack of flexibility in its actual requirements, was designed to meet the needs of many students who had to study in their spare time. We find, therefore, that this examination is held three times a year, and that the unsuccessful student is allowed to try again if he fails.1 In fact, if we may liken an examination to a carrot dangled in front of a donkey's nose, the extremely varied regulations governing different examinations can be viewed as the manipulation of the carrot. The regulations ought to be sufficiently reasonable to avoid discouraging the candidate, but sufficiently stringent to stimulate the work out of which his learning and education arise. The Certificate of Proficiency in English is held on dates suited to the students taking it, and the regulations allow sufficient flexibility to encourage those working under peculiarly difficult conditions.

Thirdly, the examination must be fair. It is clear that a student will work confidently for an examination if he is satisfied that he will be judged by entirely impartial examiners,

¹ It is an interesting point that the added difficulties of these students since the war have been recognised by allowing a candidate who passes in four of the five subjects to take the fifth one alone on a subsequent occasion.



INCENTIVES TO LEARNING

who will pass him if he is worthy to pass, and fail him if he is weak. One factor that makes for such confidence is the use throughout of examination numbers instead of names. Another, is the readiness of the examining body to verify any results which may be in doubt, and to admit errors if they are brought to light. But there are also a number of less obvious factors contributing to the fairness of an examination, which are dependent upon the technical skill and experience of those responsible for it. One such factor is the need to maintain the same pass standard from year to year. Students will not work confidently for an examination unless they know that the examiners will not suddenly and arbitrarily 'make it more difficult to pass this year than last year'. This constitutes one of the main technical problems of those in control of examinations and will be discussed in some detail in the next chapter. Another technical problem affecting the fairness of examinations, namely, the standardisation of the examiners themselves, can be illustrated by means of an example from the Proficiency in English Examination.

In this examination each student's spoken English is tested, probably by a single examiner who, by talking to him, forms an impression of his conversational ability, and classifies it as 'very good', 'good', 'pass', 'fail', or assigns marks which indicate these standards. But, by reason of the number of students to be examined, it is not always possible for the same examiner to converse with all the candidates. The work is therefore shared between two or three examiners, each responsible for a certain number of students. Apart from any question of favouritism, there is a danger that any two examiners will have different ideas of what constitutes a 'good command of spoken English'. One examiner may have been dealing with a number of candidates with an exceptionally good English accent and knowledge of the language, and may have, in consequence, a 'high standard'. Another may have been examining a number of weak students and may be so pleased when a bright one comes along that he overmarks the latter in contrast to the others. If we regard each examiner as