Play and Work in the Curriculum

1. The Place of Active Occupations in Education

In consequence partly of the efforts of educational reformers, partly of increased interest in child-psychology, and partly of the direct experience of the schoolroom, the course of study has in the past generation undergone considerable modification. The desirability of starting from and with the experience and capacities of learners, a lesson enforced from all three quarters, has led to the introduction of forms of activity, in play and work, similar to those in which children and youth engage outside of school. Modern psychology has substituted for the general, ready-made faculties of older theory a complex group of instinctive and impulsive tendencies. Experience has shown that when children have a chance at physical activities which bring their natural impulses into play, going to school is a joy, management is less of a burden, and learning is easier. Sometimes, perhaps, plays, games, and constructive occupations are resorted to only for these reasons, with emphasis upon relief from the tedium and strain of "regular" school work. There is no reason, however, for using them merely as agreeable diversions. Study of mental life has made evident the fundamental worth of native tendencies to explore, to manipulate tools and materials, to construct, to give expression to joyous emotion, etc. When exercises which are prompted by these instincts are a part of the regular school program, the whole pupil is engaged, the artificial gap between life in school and out is reduced, motives are afforded for attention to a large variety of materials and processes distinctly educative in effect, and cooperative associations which give information in a social setting are provided. In short, the grounds for assigning to play and active work a definite place in the curriculum are intellectual and social, not matters of temporary expediency and momentary agreeableness. Without something of the kind, it is not possible to secure the normal estate of effective learning; namely, that knowledge-getting be an outgrowth of activities having their own end, instead of a school task. More specifically, play and work correspond, point for point, with the traits of the initial stage of knowing, which consists, as we saw in the last chapter, in learning how to do things and in acquaintance with things and processes gained in the doing. It is suggestive that among the Greeks, till the rise of conscious philosophy, the same word, techne, was used for art and science. Plato gave his account of knowledge on the basis of an analysis of the knowledge of cobblers, carpenters, players of musical instruments, etc., pointing out that their art (so far as it was not mere routine) involved an end, mastery of material or stuff worked upon, control of appliances, and a definite order of procedure - all of which had to be known in order that there be intelligent skill or art.

Doubtless the fact that children normally engage in play and work out of school has seemed to many educators a reason why they should concern themselves in school with things radically different. School time seemed too precious to spend in doing over again what children were sure to do any way. In some social conditions, this reason has weight. In pioneer times, for example, outside occupations gave a definite and valuable intellectual and moral training. Books and everything concerned with them were, on the other hand, rare and difficult of access; they were the only means of outlet from a narrow and crude environment. Wherever such conditions obtain, much may be said in favor of concentrating school activity upon books. The situation is very different, however, in most communities to-day. The kinds of work in which the young can engage, especially in cities, are largely antieducational. That prevention of child labor is a social duty is evidence on this point. On the other hand, printed matter has been so cheapened and is in such universal circulation, and all the opportunities of intellectual culture have been so multiplied, that the older type of book work is far from having the force it used to possess.

But it must not be forgotten that an educational result is a by-product of play and work in most out-of-school conditions. It is incidental, not primary. Consequently the educative growth secured is more or less accidental. Much work shares in the defects of existing industrial society - defects next to fatal to right development. Play tends to reproduce and affirm the crudities, as well as the excellencies, of surrounding adult life. It is the business of the school to set up an environment in which play and work shall be conducted with reference to facilitating desirable mental and moral growth. It is not enough just to introduce plays and games, hand work and manual exercises. Everything depends upon the way in which they are employed.

2. Available Occupations

A bare catalogue of the list of activities which have already found their way into schools indicates what a rich field is at hand. There is work with paper, cardboard, wood, leather, cloth, yarns, clay and sand, and the metals, with and without tools. Processes employed are folding, cutting, pricking, measuring, molding, modeling, pattern-making, heating and cooling, and the operations characteristic of such tools as the hammer, saw, file, etc. Outdoor excursions, gardening, cooking, sewing, printing, book-binding, weaving, painting, drawing, singing, dramatization, story-telling, reading and writing as active pursuits with social aims (not as mere exercises for acquiring skill for future use), in addition to a countless variety of plays and games, designate some of the modes of occupation.

The problem of the educator is to engage pupils in these activities in such ways that while manual skill and technical efficiency are gained and immediate satisfaction found in the work, together with preparation for later usefulness, these things shall be subordinated to education - that is, to intellectual results and the forming of a socialized disposition. What does this principle signify? In the first place, the principle rules out certain practices. Activities which follow definite prescription and dictation or which reproduce without modification ready-made models, may give muscular dexterity, but they do not require the perception and elaboration of ends, nor (what is the same thing in other words) do they permit the use of judgment in selecting and adapting means. Not merely manual training

specifically so called but many traditional kindergarten exercises have erred here. Moreover, opportunity for making mistakes is an incidental requirement. Not because mistakes are ever desirable, but because overzeal to select material and appliances which forbid a chance for mistakes to occur, restricts initiative, reduces judgment to a minimum, and compels the use of methods which are so remote from the complex situations of life that the power gained is of little availability. It is guite true that children tend to exaggerate their powers of execution and to select projects that are beyond them. But limitation of capacity is one of the things which has to be learned; like other things, it is learned through the experience of consequences. The danger that children undertaking too complex projects will simply muddle and mess, and produce not merely crude results (which is a minor matter) but acquire crude standards (which is an important matter) is great. But it is the fault of the teacher if the pupil does not perceive in due season the inadequacy of his performances, and thereby receive a stimulus to attempt exercises which will perfect his powers. Meantime it is more important to keep alive a creative and constructive attitude than to secure an external perfection by engaging the pupil's action in too minute and too closely regulated pieces of work. Accuracy and finish of detail can be insisted upon in such portions of a complex work as are within the pupil's capacity.

Unconscious suspicion of native experience and consequent overdoing of external control are shown quite as much in the material supplied as in the matter of the teacher's orders. The fear of raw material is shown in laboratory, manual training shop, Froebelian kindergarten, and Montessori house of childhood. The demand is for materials which have already been subjected to the perfecting work of mind: a demand which shows itself in the subject matter of active occupations quite as well as in academic book learning. That such material will control the pupil's operations so as to prevent errors is true. The notion that a pupil operating with such material will somehow absorb the intelligence that went originally to its shaping is fallacious. Only by starting with crude material and subjecting it to purposeful handling will he gain the intelligence embodied in finished material. In practice, overemphasis upon formed material leads to an exaggeration of mathematical gualities, since intellect finds its profit in physical things from matters of size, form, and proportion and the relations that flow from them. But these are known only when their perception is a fruit of acting upon purposes which require attention to them. The more human the purpose, or the more it approximates the ends which appeal in daily experience, the more real the knowledge. When the purpose of the activity is restricted to ascertaining these qualities, the resulting knowledge is only technical.

To say that active occupations should be concerned primarily with wholes is another statement of the same principle. Wholes for purposes of education are not, however, physical affairs. Intellectually the existence of a whole depends upon a concern or interest; it is qualitative, the completeness of appeal made by a situation. Exaggerated devotion to formation of efficient skill irrespective of present purpose always shows itself in devising exercises isolated from a purpose. Laboratory work is made to consist of tasks of accurate measurement with a view to acquiring knowledge of the fundamental units of physics, irrespective of contact with the problems which make these units important; or of

operations designed to afford facility in the manipulation of experimental apparatus. The technique is acquired independently of the purposes of discovery and testing which alone give it meaning. Kindergarten employments are calculated to give information regarding cubes, spheres, etc., and to form certain habits of manipulation of material (for everything must always be done "just so"), the absence of more vital purposes being supposedly compensated for by the alleged symbolism of the material used. Manual training is reduced to a series of ordered assignments calculated to secure the mastery of one tool after another and technical ability in the various elements of construction - like the different joints. It is argued that pupils must know how to use tools before they attack actual making, - assuming that pupils cannot learn how in the process of making. Pestalozzi's just insistence upon the active use of the senses, as a substitute for memorizing words, left behind it in practice schemes for "object lessons" intended to acquaint pupils with all the qualities of selected objects. The error is the same: in all these cases it is assumed that before objects can be intelligently used, their properties must be known. In fact, the senses are normally used in the course of intelligent (that is, purposeful) use of things, since the qualities perceived are factors to be reckoned with in accomplishment. Witness the different attitude of a boy in making, say, a kite, with respect to the grain and other properties of wood, the matter of size, angles, and proportion of parts, to the attitude of a pupil who has an object-lesson on a piece of wood, where the sole function of wood and its properties is to serve as subject matter for the lesson.

The failure to realize that the functional development of a situation alone constitutes a "whole" for the purpose of mind is the cause of the false notions which have prevailed in instruction concerning the simple and the complex. For the person approaching a subject, the simple thing is his purpose - the use he desires to make of material, tool, or technical process, no matter how complicated the process of execution may be. The unity of the purpose, with the concentration upon details which it entails, confers simplicity upon the elements which have to be reckoned with in the course of action. It furnishes each with a single meaning according to its service in carrying on the whole enterprise. After one has gone through the process, the constituent qualities and relations are elements, each possessed with a definite meaning of its own. The false notion referred to takes the standpoint of the expert, the one for whom elements exist; isolates them from purposeful action, and presents them to beginners as the "simple" things. But it is time for a positive statement. Aside from the fact that active occupations represent things to do, not studies, their educational significance consists in the fact that they may typify social situations. Men's fundamental common concerns center about food, shelter, clothing, household furnishings, and the appliances connected with production, exchange, and consumption.

Representing both the necessities of life and the adornments with which the necessities have been clothed, they tap instincts at a deep level; they are saturated with facts and principles having a social quality.

To charge that the various activities of gardening, weaving, construction in wood, manipulation of metals, cooking, etc., which carry over these fundamental human concerns

into school resources, have a merely bread and butter value is to miss their point. If the mass of mankind has usually found in its industrial occupations nothing but evils which had to be endured for the sake of maintaining existence, the fault is not in the occupations, but in the conditions under which they are carried on. The continually increasing importance of economic factors in contemporary life makes it the more needed that education should reveal their scientific content and their social value. For in schools, occupations are not carried on for pecuniary gain but for their own content. Freed from extraneous associations and from the pressure of wage-earning, they supply modes of experience which are intrinsically valuable; they are truly liberalizing in quality.

Gardening, for example, need not be taught either for the sake of preparing future gardeners, or as an agreeable way of passing time. It affords an avenue of approach to knowledge of the place farming and horticulture have had in the history of the race and which they occupy in present social organization. Carried on in an environment educationally controlled, they are means for making a study of the facts of growth, the chemistry of soil, the role of light, air, and moisture, injurious and helpful animal life, etc. There is nothing in the elementary study of botany which cannot be introduced in a vital way in connection with caring for the growth of seeds. Instead of the subject matter belonging to a peculiar study called botany, it will then belong to life, and will find, moreover, its natural correlations with the facts of soil, animal life, and human relations. As students grow mature, they will perceive problems of interest which may be pursued for the sake of discovery, independent of the original direct interest in gardening - problems connected with the germination and nutrition of plants, the reproduction of fruits, etc., thus making a transition to deliberate intellectual investigations.

The illustration is intended to apply, of course, to other school occupations, - wood-working, cooking, and on through the list. It is pertinent to note that in the history of the race the sciences grew gradually out from useful social occupations. Physics developed slowly out of the use of tools and machines; the important branch of physics known as mechanics testifies in its name to its original associations. The lever, wheel, inclined plane, etc., were among the first great intellectual discoveries of mankind, and they are none the less intellectual because they occurred in the course of seeking for means of accomplishing practical ends. The great advance of electrical science in the last generation was closely associated, as effect and as cause, with application of electric agencies to means of communication, transportation, lighting of cities and houses, and more economical production of goods. These are social ends, moreover, and if they are too closely associated with notions of private profit, it is not because of anything in them, but because they have been deflected to private uses: - a fact which puts upon the school the responsibility of restoring their connection, in the mind of the coming generation, with public scientific and social interests. In like ways, chemistry grew out of processes of dying, bleaching, metal working, etc., and in recent times has found innumerable new uses in industry.

Mathematics is now a highly abstract science; geometry, however, means literally earthmeasuring: the practical use of number in counting to keep track of things and in measuring

is even more important to-day than in the times when it was invented for these purposes. Such considerations (which could be duplicated in the history of any science) are not arguments for a recapitulation of the history of the race or for dwelling long in the early rule of thumb stage. But they indicate the possibilities - greater to-day than ever before - of using active occupations as opportunities for scientific study. The opportunities are just as great on the social side, whether we look at the life of collective humanity in its past or in its future. The most direct road for elementary students into civics and economics is found in consideration of the place and office of industrial occupations in social life. Even for older students, the social sciences would be less abstract and formal if they were dealt with less as sciences (less as formulated bodies of knowledge) and more in their direct subject-matter as that is found in the daily life of the social groups in which the student shares.

Connection of occupations with the method of science is at least as close as with its subject matter. The ages when scientific progress was slow were the ages when learned men had contempt for the material and processes of everyday life, especially for those concerned with manual pursuits. Consequently they strove to develop knowledge out of general principles - almost out of their heads - by logical reasons. It seems as absurd that learning should come from action on and with physical things, like dropping acid on a stone to see what would happen, as that it should come from sticking an awl with waxed thread through a piece of leather. But the rise of experimental methods proved that, given control of conditions, the latter operation is more typical of the right way of knowledge than isolated logical reasonings. Experiment developed in the seventeenth and succeeding centuries and became the authorized way of knowing when men's interests were centered in the question of control of nature for human uses. The active occupations in which appliances are brought to bear upon physical things with the intention of effecting useful changes is the most vital introduction to the experimental method.

3. Work and Play

What has been termed active occupation includes both play and work. In their intrinsic meaning, play and industry are by no means so antithetical to one another as is often assumed, any sharp contrast being due to undesirable social conditions. Both involve ends consciously entertained and the selection and adaptations of materials and processes designed to effect the desired ends. The difference between them is largely one of time-span, influencing the directness of the connection of means and ends. In play, the interest is more direct - a fact frequently indicated by saying that in play the activity is its own end, instead of its having an ulterior result. The statement is correct, but it is falsely taken, if supposed to mean that play activity is momentary, having no element of looking ahead and none of pursuit. Hunting, for example, is one of the commonest forms of adult play, but the existence of foresight and the direction of present activity by what one is watching for are obvious. When an activity is its own end in the sense that the action of the moment is complete in itself, it is purely physical; it has no meaning (See p. 77). The person is either going through motions quite blindly, perhaps purely imitatively, or else is in a state of excitement which is exhausting to mind and nerves. Both results may be seen in some types

of kindergarten games where the idea of play is so highly symbolic that only the adult is conscious of it. Unless the children succeed in reading in some quite different idea of their own, they move about either as if in a hypnotic daze, or they respond to a direct excitation.

The point of these remarks is that play has an end in the sense of a directing idea which gives point to the successive acts. Persons who play are not just doing something (pure physical movement); they are trying to do or effect something, an attitude that involves anticipatory forecasts which stimulate their present responses. The anticipated result, however, is rather a subsequent action than the production of a specific change in things. Consequently play is free, plastic. Where some definite external outcome is wanted, the end has to be held to with some persistence, which increases as the contemplated result is complex and requires a fairly long series of intermediate adaptations. When the intended act is another activity, it is not necessary to look far ahead and it is possible to alter it easily and frequently. If a child is making a toy boat, he must hold on to a single end and direct a considerable number of acts by that one idea. If he is just "playing boat" he may change the material that serves as a boat almost at will, and introduce new factors as fancy suggests. The imagination makes what it will of chairs, blocks, leaves, chips, if they serve the purpose of carrying activity forward.

From a very early age, however, there is no distinction of exclusive periods of play activity and work activity, but only one of emphasis. There are definite results which even young children desire, and try to bring to pass. Their eager interest in sharing the occupations of others, if nothing else, accomplishes this. Children want to "help"; they are anxious to engage in the pursuits of adults which effect external changes: setting the table, washing dishes, helping care for animals, etc. In their plays, they like to construct their own toys and appliances. With increasing maturity, activity which does not give back results of tangible and visible achievement loses its interest. Play then changes to fooling and if habitually indulged in is demoralizing. Observable results are necessary to enable persons to get a sense and a measure of their own powers. When make-believe is recognized to be makebelieve, the device of making objects in fancy alone is too easy to stimulate intense action. One has only to observe the countenance of children really playing to note that their attitude is one of serious absorption; this attitude cannot be maintained when things cease to afford adequate stimulation.

When fairly remote results of a definite character are foreseen and enlist persistent effort for their accomplishment, play passes into work. Like play, it signifies purposeful activity and differs not in that activity is subordinated to an external result, but in the fact that a longer course of activity is occasioned by the idea of a result. The demand for continuous attention is greater, and more intelligence must be shown in selecting and shaping means. To extend this account would be to repeat what has been said under the caption of aim, interest, and thinking. It is pertinent, however, to inquire why the idea is so current that work involves subordination of an activity to an ulterior material result. The extreme form of this subordination, namely drudgery, offers a clew. Activity carried on under conditions of external pressure or coercion is not carried on for any significance attached to the doing.

The course of action is not intrinsically satisfying; it is a mere means for avoiding some penalty, or for gaining some reward at its conclusion. What is inherently repulsive is endured for the sake of averting something still more repulsive or of securing a gain hitched on by others. Under unfree economic conditions, this state of affairs is bound to exist. Work or industry offers little to engage the emotions and the imagination; it is a more or less mechanical series of strains. Only the hold which the completion of the work has upon a person will keep him going. But the end should be intrinsic to the action; it should be its end - a part of its own course. Then it affords a stimulus to effort very different from that arising from the thought of results which have nothing to do with the intervening action. As already mentioned, the absence of economic pressure in schools supplies an opportunity for reproducing industrial situations of mature life under conditions where the occupation can be carried on for its own sake. If in some cases, pecuniary recognition is also a result of an action, though not the chief motive for it, that fact may well increase the significance of the occupation. Where something approaching drudgery or the need of fulfilling externally imposed tasks exists, the demand for play persists, but tends to be perverted. The ordinary course of action fails to give adequate stimulus to emotion and imagination. So in leisure time, there is an imperious demand for their stimulation by any kind of means; gambling, drink, etc., may be resorted to. Or, in less extreme cases, there is recourse to idle amusement; to anything which passes time with immediate agreeableness. Recreation, as the word indicates, is recuperation of energy. No demand of human nature is more urgent or less to be escaped. The idea that the need can be suppressed is absolutely fallacious, and the Puritanic tradition which disallows the need has entailed an enormous crop of evils. If education does not afford opportunity for wholesome recreation and train capacity for seeking and finding it, the suppressed instincts find all sorts of illicit outlets, sometimes overt, sometimes confined to indulgence of the imagination. Education has no more serious responsibility than making adequate provision for enjoyment of recreative leisure; not only for the sake of immediate health, but still more if possible for the sake of its lasting effect upon habits of mind. Art is again the answer to this demand.

Summary

In the previous chapter we found that the primary subject matter of knowing is that contained in learning how to do things of a fairly direct sort. The educational equivalent of this principle is the consistent use of simple occupations which appeal to the powers of youth and which typify general modes of social activity. Skill and information about materials, tools, and laws of energy are acquired while activities are carried on for their own sake. The fact that they are socially representative gives a quality to the skill and knowledge gained which makes them transferable to out-of-school situations. It is important not to confuse the psychological distinction between play and work with the economic distinction. Psychologically, the defining characteristic of play is not amusement nor aimlessness. It is the fact that the aim is thought of as more activity in the same line, without defining continuity of action in reference to results produced. Activities as they grow more complicated gain added meaning by greater attention to specific results achieved. Thus they pass gradually into work. Both are equally free and intrinsically motivated, apart from false

economic conditions which tend to make play into idle excitement for the well to do, and work into uncongenial labor for the poor. Work is psychologically simply an activity which consciously includes regard for consequences as a part of itself; it becomes constrained labor when the consequences are outside of the activity as an end to which activity is merely a means. Work which remains permeated with the play attitude is art - in quality if not in conventional designation.



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