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GEOGRAPHY IN THE INTERMEDIATE GRADES *

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1. The intermediate grades are a neglected field in educational theory and practice. Primary work has received a great deal of attention, and the upper grades have always been regarded as important; but the intermediate grades have frequently been the junk-pile for worn-out, inefficient teachers, the training ground for the novices, and the only field absolutely untouched by the rejuvenating spirit of modern methods. And yet the intermediate grades cover the most important formative period of the child's life. During this period, the child has more energy at his disposal in proportion to his weight than at any other time, and he has the greatest power to resist fatigue and disease. This is the time when the teacher can do the most for the child once he understands him; but it is also the time when the child is hardest to understand.

The essential mental characteristics of the child at this stage of his development are (1) his dislike for sustained effort, (2) his slight capacity for 'reasoning,' and (3) his marvelous retentiveness both for verbal forms and for vivid pictures. Authorities agree that the child can accomplish a great deal in this period if he is guided by a strong hand. Here, perhaps, more than anywhere else in school work, the teacher has constantly to battle against nature. The passion for change,—the desire 'to do something else,'—is never so strong. But here, too, these natural and primitive desires can be resisted with least injury to the child. In short, this is the period for serious work with plenty of time for rough and ready play—out of school. This is the time for vivid portrayals, for picture lessons, for school excursions; but it is also the time for drill-lessons, for word memorizing,—the time, in brief, for storing up vivid images and for laying the automatic bases of life.

2. In the geography of the intermediate grades, two important phases of the subject are covered: (1) home geography, which is treated mainly by excursions, by careful observation of the home environment and by simple experiments; and (2) the 'first spiral' of world-geography, which is treated by maps, pictures, oral descriptions and books. The latter phase has to do particularly with the use of the smaller or introductory text-book. Our especial problem will be to review briefly the principles that underlie the suc-

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cessful use of this text-book and the use of maps, pictures, models, and other supplementary material in connection with it.

3. The *function of geography in the intermediate grades* is primarily to fix facts and to give the child vivid pictures of various parts of the earth's surface. 'Reasoning work,' by which we mean the pointing out of causal relations, is not much in place at this time. Such work is rather the function of the grammar school geography. Here, however, it is not as much *why* as *what*; not so much the reason as the fact. For example, in the intermediate grades, the fact that New York is the largest city in the United States should be firmly impressed; in the upper grades the pupil should discover the reason for the growth of this city.

A great deal of the place and location-geography, now somewhat in disfavor, may profitably be re-introduced into the intermediate grades. A solid foundation of fact is essential to the later reasoning work, and the intermediate grades are the place where facts may be most easily and economically impressed. Memoriter work may become a legitimate and important factor here *after the facts have been vividly portrayed and richly illustrated*. The evil of the older memoriter methods lay in the fact that dependence was placed exclusively on repetition and rote-learning. The evil of the ultra-modern methods lies in the fact that vivid portrayal and detailed illustration are believed to be sufficient and any form of memoriter work a waste of time. Careful experiments have recently demonstrated, however, that verbal repetition greatly increases the 'revival value' of facts that have either been vividly impressed or 'reasoned out.' A compromise between the two extremes is probably the best guide for practice.

4. The *text-book* used in the first spiral should be selected with reference to the function of the course. In general a good text-book for this stage of the work should fulfil the following conditions:

(a) In style it should be descriptive rather than explanatory or expository. For this reason it should *not* be a mere abridgement of the larger geography, as so many of the elementary text-books are. The treatment should be entirely different. The larger book is necessarily concerned with causal relations and a mere compression makes the treatment formal and lifeless. The most important characteristics of a good introductory work are detail and wealth of descriptive illustration.

(b) On the other hand, the text should be systematic and comprehensive; that is, it should treat the various subjects in a definite and fairly complete manner. This is why even the best of the supplementary readers, such as Carpenter's and Johonnot's, are not suitable for texts. They are rich in

description, but they lack system. Their function is to supplement the text, not to replace it.

(c) The text should emphasize particularly the *people* of different countries,—how they live, how they dress, how they amuse themselves, how they work,—rather than industrial and commercial features of a more abstract nature. The child-life of various countries, as well as the plant and animal life, should receive special attention. Even a partial restitution of the old ‘curiosity-geography’ of Peter Parley and other early writers might not work an evil. This is the wonder-age of childhood and vividness of portrayal may even border on the spectacular without doing a great deal of harm.

(d) Finally and fundamentally, the elementary text-books should be replete with pictorial illustrations which should be used explicitly for purposes of instruction and not merely as means of diversion and amusement.

5. The *use* of the text-book during this period involves one very important difficulty. The elementary geography is the first book that the pupil uses purely and simply as a text. Therefore the teacher has not only to teach geography but also to teach the child how to study,—how to gain experiences through the medium of the printed page. The trouble which the child finds in ‘studying’ his geography lesson is precisely similar to the trouble which the adult finds in reading a book upon some subject with which he is unfamiliar. It is not sufficient that the child ‘know how to read.’ He may be able to do this satisfactorily and yet be unable to grasp the thought that the book presents.

This difficulty of ‘preparing’ the lesson leads in many cases to the use of the smaller geography as a reading-book. The lesson is read in class rather than ‘recited,’ and this process is sometimes continued throughout the fourth grade. In the writer’s opinion, this is bad practice. The geography may contain ‘reading-lessons’ which may properly be treated in this way, but, in general, the text is designed as a text and as such it is to be prepared and recited upon.

6. It is in the *study-lesson*, then, that there is greatest need for the oversight and direction of the teacher. The statement made by President Hall regarding history is equally applicable to the study of geography: “At least three-fourths of the time spent by a boy of twelve in trying to learn a hard lesson out of a book is time thrown away. Perhaps one-fourth of the time is devoted to more or less desperate and conscientious effort; but the large remaining portion is dwindled away in thinking of the last game of ball and longing for the next game of tag.” The problem of the teacher is to overcome this difficulty and eliminate this waste.

To this end several devices are available. In a great many schools, the main facts of world-geography are developed orally before the child takes up the text-book? This is the policy in the Butte schools; (see *Report of Public Schools*, Butte, Mont., 1903-04, pp. 153-154.) The oral work in world-geography follows the oral work in home geography and precedes the book. The advantage of this plan is that the first part of the book work covers a field with which the children are already familiar.

Another plan is to take up the book immediately after finishing the home geography, using the oral methods, however, to introduce each lesson. That is, the material of the lesson is worked over in class before the book is touched, then the same lesson is studied by the pupils at their seats, and finally a recitation is made upon the text. In this way, the pupil becomes familiar with the thought and hence is enabled to read the text intelligently. In this way, too, certain points of interest may be raised concerning the subject-matter which the pupil may be anxious to amplify from a study of the text. Thus he will have a motive for that application without which the study-lesson is likely to be a mere mumbling of words.

7. Either of these methods may be employed to facilitate the pupil's introduction to the art of study. In either case, however, the introductory oral work must sooner or later give place to a more independent use of the text by the pupil. In what manner shall this later phase of the work be treated in order to involve as little waste of time as possible?

Let us examine, in the first place, the difficulties that confront the teacher at this point. Assuming that the pupil knows something of the subject-matter (and it is idle folly to set a child at a book-lesson if this is not the case,) it is still true that he will frequently, even under the most favorable conditions, find it difficult to hold his mind closely to the reading. Attention is a rhythmic process. Whatever appeals to the attention must correspond in some measure to the 'rise, poise, fall' of the attention-wave. In oral instruction, this condition is easily fulfilled. By modulation of the voice, by facial expression, by gestures, we may emphasize the salient points and minimize those that are less important. The material of the text-book, however,—even at its best,—is more or less upon the same 'level.' It is an aggregate rather than an organized unity. Its perusal, therefore, becomes monotonous, and attention avoids monotony as nature avoids a vacuum. How, then, may the salient features of the text be so emphasized as to relieve this monotony and introduce a useful variety?

(a) It is customary among the best teachers to bestow not a little care upon the assignment of a book-lesson, and in the course of this assignment to point out very explicitly the features that the lesson is intended to emphasize.

This is an excellent practice and one that cannot be too faithfully cultivated; but even a skillful assignment is hardly enough to insure maximal success. Some method must be employed to keep the pupil's mind constantly returning to these salient points.

To this end, questions written upon the blackboard and covering the essential features of the lesson are extremely useful. These questions should be based upon the text and so framed as to admit of answer only after a study of a certain portion of the text. Such questions may then be used in the recitation, although they should, of course, be supplemented by others of a more detailed nature.

(b) As the pupil becomes more and more familiar with technical terms and fundamental conceptions, the questions may be replaced by *topical outlines* covering the matter of the text, and these in turn may form the basis of a topical recitation. These should be a gradual outgrowth of the questions and made very full and detailed at the start, gradually becoming more and more schematic as the pupil becomes practised in their use. Some of the smaller geographies have such outlines appended to each chapter. That the pupils seldom use them is due to the fact that they have never been trained in such use.

(c) A third device may be profitably employed in connection with those just mentioned. The pupils may be encouraged to make occasional lists of questions for themselves, covering the material of the text. The pupil submitting the best list may then be permitted to 'quiz' the class,—to turn teacher for the time being. This gives the child a motive for reading the text carefully and searching out its important points. Indeed, it is so successful a device that teachers who employ it are often tempted to carry it too far. The pupils come to look, not for the important points, but for obscure details which may be overlooked by their fellows. Like all devices that call into function the powerful instinct of emulation, it must be handled judiciously if it is not to defeat its own purpose.

(d) Growing out of this device is a fourth and final,—leading the pupil to make for himself an outline of the text assigned. This is an art to the cultivation of which we pay altogether too little attention in our present-day methods. If the child acquires what might be termed the 'outing habit' early in life, he will, in course of time, acquire the ability to make a serviceable outline without resorting to pencil or paper,—holding his attention over a long series of topics without undue exertion. He will no longer read, as many of us do, even in adult life, following the words faithfully with the eye, while the wits go wool-gathering. Such a mastery of the art of study involves, of course, a great deal of hard work on the part of both teacher and

pupil. Moreover the road has to be traversed anew for every subject that is taken up; for we cannot think of a 'generalized habit' of study any more than we can think of a generalized habit of cleanliness or industry. All habits are specific; but we can have ideas and ideals as to the best methods of study, and these will be only strengthened by persistent practice in various fields.

8. The elementary text-book should be the central feature of the first spiral in geography, but the work should by no means be limited to the text. The *supplementary readers* which are now available in great abundance should form an integral part of the course, and the fourth and fifth grades should be supplied with at least two sets of these readers.

Whatever supplementary reader is used, great care should be taken to correlate the material with the text. If the class is studying South America, for example, it would be absurd to use Carpenter's *Asia* for supplementary purposes. A definite period should be assigned for the supplementary reading. This should be taken preferably from the time allotted to reading as such rather than from the time allotted to geography. If five periods a week are devoted to reading, two of these may well be given to the geographical supplements.

9. Aside from the geographical supplements used in the class-room, the *home reading* of the pupils may profitably be correlated with the work in geography. There are a number of excellent books of travel and exploration that are written in a style adapted to children. In districts that do not enjoy the advantages of a public library, some of these should find a place in the school library. The series written by Knox and by Scudder, although belonging to the last generation, are still acceptable. Even Jacob Abbott's books of travel for children, belonging to a still more remote period, have a certain charm that will insure their survival. Of modern books, there is a wealth of good material to choose from. One in particular may be recommended,—Frank T. Bullen's *Cruise of the Cachalot*,—a book that should have a place in every school library. In general, books of travel that are written in the narrative or 'story' form will appeal more strongly to children of this age than those that are merely descriptive.

10. The use of *pictures* to supplement verbal instruction is of paramount importance in the first spiral. The child is still in the period of concrete thought. He is, it is true, slowly emerging into the conceptual stage, but the concrete is still uppermost and should be appealed to constantly in the work of the school. As already indicated, the pictures that appear in the text-books should be used explicitly for purposes of instruction and not as means of diversion or amusement. For example, in studying the southern

states, the pupil may chance upon a cut representing the levee at New Orleans. This picture typifies the commercial life of this important port, and if the teacher and his pupils were upon the levee actually watching this scene, the situation would undoubtedly be turned to educative account. The children would inquire about the great bales of cotton,—where they came from, where they were going, what was to be done with them. They would note the contrast between the river steamboats and the ocean steamers and ask why the former were so different from the latter in shape and size and means of propulsion. They would be curious to know why the bales were packed on the decks of the steamboats instead of being stored away in the holds as in the case of the steamers. The teacher would then explain the difference between ocean and river navigation,—the need for small, light-draught craft for the former and the need for large, deep, well-protected hulls for the latter,—the difference between paddle-wheels and screw-propellers, and why the latter are suitable for the steamer but unsuitable for the steamboat. The necessity for trans-shipment, which is the keynote of the growth of trade centers, would then be far clearer to the pupils than a week of formal instruction could make it. Now the picture that represents this scene may be used in precisely the same manner. It lacks, it is true, the life, the movement, the never-ceasing change and diversity of the real situation, but these may be compensated in some measure by the interest and enthusiasm that the teacher can put into the picture-lesson.

In some of the larger cities, the *lantern-lesson* has become an integral part of the geographical instruction. Each school has a small stereopticon (a serviceable lantern may be purchased for fifty dollars) and several sets of slides representing all phases of geographical work are kept at a central office. These are catalogued with a full description of each slide. If the teacher in the fourth or fifth grade wishes to give a lantern-lesson he consults the catalogue to find the slides that are available and the subjects treated by each. These are then distributed among the members of the class, each member being given one or more topics to work up. The pupils find from their geographies, their supplementary readers, their reference books all the information possible concerning the several topics. Each pupil then puts his material in brief form and on the day of the lantern-lesson, he 'lectures' to his fellow-pupils for two or three minutes upon the picture which has fallen to his lot for description. In this way, the pupils have a very powerful motive for gathering information and putting it in good shape. Needless to say, a lantern-lesson that does not involve this activity of the pupils is of slight value as an educative agency, however entertaining

it may be. Pictures, like travel, avail but little if only the passive attention is appealed to.

While the lantern-lesson is probably out of the question for the majority of schools, the principle that conditions its success may be applied to the treatment of other than lantern pictures. Every fourth and fifth grade room should have a number of portfolios of pictures illustrating various phases of geographical instruction. In this day of cheap magazines, such illustrations can be collected without cost. They should be mounted on large cards of uniform size, appropriately labeled and filed away. They may then be employed as in the lantern-lesson, by having each pupil work up a picture for explanation on the day assigned for the lesson. It is hardly necessary to say that the force of the picture or lantern-lesson would be greatly diminished by too frequent application. One of the strong points of the device is its novelty, and this can be preserved only by temperate use.

11. We have said that the period covered by the intermediate grades is the most favorable time for impressing vivid pictures. This means, among other things, that the *map study* of the first spiral is extremely important. This is the time to give the pupil accurate map-pictures. He should be able to visualize maps,—to see the details and form-relations in his 'mind's eye.' In a former paper on home geography, some suggestions were given for making map-study meaningful to the child. The general procedure there laid down may be profitably continued throughout the intermediate grades. The map is a *symbol*, and the intelligent use of symbols always depends upon a *gradual process of condensation and abstraction from the objects symbolized*. If this process has not been carried out faithfully, the use of symbols becomes mere formalism. This danger is to be combatted most strenuously in the teaching of arithmetic, but it is not to be overlooked in geography. The map may easily become simply a complex of colored spaces, interlaced with lines and sprinkled with dots and letters. The pupil may acquire the art of juggling very successfully with maps, just as he may juggle with figures, without having the slightest conception of their meaning.

If the pupil has passed faithfully through the initial stages of map-study, however,—modeling land-features found in his immediate environment, reducing these by scale to map-form, modeling land-features from maps of regions that he has not seen, etc.,—he is quite ready for an intelligent and intensive study of maps in connection with world-geography. The first study of any geographical unit should be a map-study. Everything that can be gained from the map should be noted before the text is consulted. The latitude and longitude of the region, the surface, the drainage, the coast-line features, the relations to other bodies of land and water, should be worked

out by the pupils from the map and impressed as facts. The deduction from these physiographical data should not be unduly pressed at this time. That is to say, the method of inference which is applied so profitably in the upper grades is not now in place. The writer has attempted to employ in the fifth grade the same methods that are employed with great success in the seventh grade and he has found, almost without exception, that the pupils fail to respond with any degree of enthusiasm. They may perhaps make such simple inferences as climate from latitude, commercial advantages from coast line and surface, etc., but the accurate inferences involving the more difficult principles of prevailing winds, moisture, ocean-currents, and the like, should be left for later development. In short this is the time for facts rather than principles, and the purpose of map-study in these grades should be to furnish the child with a definite and accurate picture of the various regions studied.

To this end, the memorizing of boundaries may be helpful if prosecuted temperately; also the memorizing of 'capitals and largest cities' and their locations, the rivers belonging to certain continental slopes and water-sheds, the chief capes, peninsulas and head lands, and particularly the names of states and countries in some definite and uniform order. This may seem decidedly reactionary to those who have come to believe that memoriter work is useless drudgery and entirely out of place in the school. But, as we have already pointed out, experiment has proved that verbal repetition will help materially in the retention and recall of experiences that have been fixed either by vivid portrayal or by processes of reasoning; and it is the writer's experience that the unsatisfactory results that we meet in the grammar school geography must be laid at the door of loose methods and especially of inadequate memory-drills in the intermediate grades.

12. *Map-drawing* is necessarily an important phase of this part of the course. The test of an adequate mental picture of the map is the ability to sketch the map quickly and accurately. Many teachers make a practice of sending a few pupils to the blackboard at the beginning of every geography lesson to sketch in a brief period,—say one or two minutes,—the main features of whatever region may be under discussion. Retention and recall are both improved by expression and the more numerous the channels of expression, the greater the advantage from the standpoint of memory. The results will be extremely crude at first but with practice under careful criticism, they will show a rapid improvement and at the end of three or four months of persistent, painstaking work, it is remarkable what the pupils can do in the way of map-sketching. One or two introductory lessons may perhaps be given in the copying of maps from the book, but this

should be reduced to a minimum; it is the free-hand sketching from memory that is the most beneficial. The finer work will come later in the upper grades, where the principles of projection should be carefully developed and maps constructed in a nice degree of accuracy.

The making of *progressive maps* is also in place in the intermediate grades. The outlines should be preferably drawn by the pupils themselves, although there is no great harm in using the lithographed outlines occasionally. The use of outline wall-maps is likewise to be commended. A good set of relief maps and a relief globe are almost indispensable to the development of adequate ideas of surface features. The objection that has been raised against relief maps and globes on the ground of the exaggerated scales that they employ is not, in the writer's opinion, valid from the educational standpoint. While a relief map of Asia may exaggerate the height of the Himalaya Mountains from the standpoint of absolute truth, the height cannot be exaggerated if we consider these mountains as impediments to human intercourse. They are effectual barriers between two different regions and, as such, their absolute height might be multiplied ninety or nine hundred times without doing violence to one's conception of them as barriers; and this, we take it, is the proper geographical conception.

SOME RESULTS OF GEOGRAPHY TEACHING

Of all elementary studies geography best affords opportunity for training pupils to *right habits of studying books*. During three school years the pupil "learns to read"; in the fourth grade he uses a text-book in geography and "reads to learn" about the world. He should be taught and accustomed to the systematic study of pictures, maps, and text, with a view to the ready and orderly expression of the knowledge gained. Through such a strenuous course the teacher must yet aim to conduct the work so that the pupil shall leave the elementary school with a *desire to continue* the study of the world and its peoples. Pupils should become accustomed to use the public library wisely to this end. Ably directed and enthusiastic study of the geography of our city, of the United States, and of the world may secure the highest ends, the development of broad *patriotism*—active love for our city, for the nation, for humanity.—From *Course of Study in Geography*, Lynn, Mass.