

From Theory to Practice:
THE CONTRIBUTIONS OF Four Developmental Psychologists
to The Field of Education

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Introduction

This article aims at showing some of the contributions made by four developmental psychologists, Baldwin, Dewey, Binet and Watson, to the field of school administration and policy making. One, however, is well aware of the fact that it is almost impossible to do justice to these psychologists in a briefly written paper. One has also to take into consideration the fact that many books have been written about the various contributions of such psychologists in many fields of life. The new scientific discoveries have strengthened and supported their discoveries and findings. Although their claims and statements have always been met with enthusiastic supporters, as well as by strong opposition, it has become clear that the future implications of their discoveries and findings are going to be as strong as, or even stronger than, their past and present implications. Therefore, one must try to be as concise and precise as possible, in order to relate to the most relevant contributions made by these four to one's field of pedagogy. As a school administrator or policy maker, one can find some of their ideas, findings and discoveries interesting. Each psychologist, according to his study and field of specialization, has left much for school administrators and policy makers to consider and ponder. This paper will discuss them one by one, aiming at depicting their specific contributions to one's field of pedagogy.

James Mark Baldwin's contributions to administrators and policy makers can be highlighted with relative ease. As an advocate and supporter of experiential learning, Baldwin has emphasized the idea of engaging

students in a practical, rather than merely theoretical, work. Baldwin supported the idea that students should experiment themselves, and that they should apply what they learn in real life. Learning through theory does not qualify students to face more practical problems. Administrators and policy makers should make sure that schools and teachers involve students in more practical and active learning. Students should not become passive recipients of knowledge. They should get a feeling for what they learn, rather than be merely lectured and superficially stimulated. Administrators, at the various school levels, have to make sure that students do not learn by rote, or through memorizing certain materials to pass certain tests, or to recite such materials on certain occasions. They should not be taught for short-term purposes, but should be able to make an account of what they learn, so that it will be a lasting part of their personal experience. Experiential learning requires that students as active participants do the experimenting on their own, with minimum guidance from their instructors, and that they practically arrive at the desired results and outcomes on their own. This entails teachers and trainers helping construct the appropriate learning settings in which students can attain such goals.

Baldwin also talks about the appropriate social context, which can suit the type of learning the students are to have. This is an important issue for administrators to consider. Administrators should guarantee that learning takes place in the most congenial social atmosphere possible, to help both students and teachers make the best of their learning and teaching experiences.

Observation is one of the methodological tools highly emphasized by Baldwin. Learning through observation is a valuable way in which one can learn a lot about his or her environment. Such a tool has led to the attainment of what is known today to be qualitative research.

Administrators can make sure that teachers closely observe their students and learn more about their individual behaviors, habits, needs and tendencies, and help them accordingly. Teachers can train and help students become strong observers, who can learn about themselves and their environment. Through observation, teachers can learn more about the qualitative differences among their pupils and help them overcome such differences through proper training and encouragement. Teachers should not only busy themselves with quantitative differences such as grades and statistics.

The aesthetic experiences Baldwin considers in enhancing the teaching process are as important. Aesthetic experiences can help students through elating feelings, which can help purify their thinking and inspire them to higher degrees of knowledge. This is an important element of learning, which can be emphasized by administrators so that they make sure their students, whether through art or through visits to exhibitions, museums and galleries, can have aesthetic experiences to inspire them and elevate their spirits. Such experiences can help students transcend the troubles of every-day life and live moments of spiritual elation.

Administrators and policy makers can also make sure to construct programs which fit the various areas of development described by Baldwin. In his three stages of development; pre-logic, logic and super-logic, Baldwin makes it clear that various stages of life require various levels of education. Such levels have to be carefully coordinated and tailored to fit the students' appropriate levels of growth and understanding, in order to allow learning to take place. One cannot jump from one stage to another without the proper preparation, unless one has no systematic and consistent approach but only an arbitrary and random one.

In his emphasis on cognitive and social development, Baldwin has made it clear for educators that there is an inter-related affinity between programs which intend both to sharpen students' mental activities and those social activities which intend to strengthen their social awareness and development. Educators should make sure that students are treated as social human beings. There have to be school programs and activities which both correspond to the social and cognitive development of students simultaneously. Students' social interactions with their environment and society are as important as their scholastic achievements. They should go hand in hand, but none should be achieved at the expense of the other.

Baldwin also talked about a need for self-realization. There is no doubt that each human being has his own personal needs. Educators should make sure that schools have room for choice. Schools are not closed communities which restrict students; rather, they should be places where students can arrive at self-fulfillment in terms of social growth, scholastic achievement and a real fulfillment of all their human needs. Such fulfillment and realization can be achieved through a thoughtful and diligent work of the officials, administrators, policy makers, to provide schools and students with the required programs, atmosphere and equipment necessary to meet such requirements.

The role of different disciplines in understanding development, which Baldwin speaks about, helps administrators and policy makers think carefully about interdisciplinary courses and programs which can help students in various fields of life. Inter-relatedness among the various subjects is a key factor in students' ability to have a holistic picture of what they study. It can also help them make an account of what they learn. Various disciplines can lead to better understanding of subjects discussed or

issues raised. The more such disciplines are inter-related, the better the understanding of such subjects becomes.

Baldwin spoke about personality as a “progressive,” “developing” and “never to be exhausted” thing. Personality for Baldwin is not fixed, but is something that always grows, progresses and develops. Teachers should make sure that the personalities of their students are given the chance and right setting to grow properly, rather than to be related to as already determined by early experiences and genes. Actions are also dynamic and highly responsive to the setting in which they take place. It is the responsibility and role of administrators to make sure that their students’ personalities and actions are given the appropriate setting and atmosphere to develop properly.

Dewey’s contributions to the field of education are strongly felt in today’s education system. Dewey viewed education as a process, and that courses have to be developed as a process. Such a process requires students’ full engagement and teachers’ careful construction. Teachers can make sure that courses are developed as a process, in which students are gently led to participate and progress from one stage to another in that process. Teachers can guarantee that from one stage to another, students make the right progress for a better understanding.

Cross-disciplinary teaching as described by Dewey helps administrators and policy makers make sure that the various disciplines the students learn are strongly inter-related. Such inter-relatedness helps both teachers and students deeply understand, communicate and make an account of what is actually being taught at school. When teaching becomes fragmented and subjects are taught with no connection between them, the quality of teaching becomes minimized and the process of teaching loses its real worth.

Dewey also advocates creating special schools for the education and training of teachers. Such a far-sighted request requires today's administrators and policy makers at schools, at all levels, to provide teachers with the required courses to qualify them to do their job appropriately. Officials often complain of having unqualified teachers, without actually providing them with the necessary training. In order to cope with the various problems and become progressively qualified to make the true connection between the various disciplines, teachers have to acquire the required training.

The democratization of the schools is another goal emphasized by Dewey. He speaks of schools as mini-democratic societies, where students and teachers can effectively share in school government. Administrators and policy makers can make sure that students and teachers are active participants in the decision making mechanism at school. They have also to encourage students to become active in the making of the democratic process and atmosphere at school, so that they will strengthen the pillars of democracy in their society at large. If students are deprived of the right of speech, if they are silenced when they oppose or reject things, or if decisions are imposed on them without their being consulted or their opinion solicited, one can expect such students to divert their frustration with such a situation towards the society at large.

Teachers at the school level can take advantage of Dewey's statement that school should promote active learning. Dewey says that learning should be encouraged to progress through doing. Teachers should guarantee that students are given the chance to learn by doing. Students have to become active participants in the learning process. Teachers can make sure to reconstruct and efficiently manipulate the environment so that they create a situation where students can learn in more practical terms.

Another point Dewey makes, which is as important, is engaging students in research. Dewey makes it clear that education needs to be carefully studied, and that students and educators raise the necessary questions regarding such educational processes. Dewey talks about the need to scientifically answer such questions and test the various hypotheses that emerge, in order to verify the truth and differentiate facts from opinions. Educators should provide their students with the opportunity of engaging themselves in research, critical thinking and scientific inquiry and investigation.

Dewey views schools as mini-communities or sub-societies with a strong emphasis on the relation between schools and the outside community. Dewey thinks that schools must share home values. Administrators and policy makers can make sure that there is a stronger parental involvement at schools. Parent-student-teacher relationships should be viewed as crucially important to promoting a healthy learning atmosphere at schools. Schools must have various social activities to involve parents and to make them feel that they are part of the educational process.

Dewey's emphasis on the various developmental stages of an individual can help administrators and policy makers approach each stage with the maximum preparation and care. Programs and curricula should be carefully tailored to fit each developmental stage. Different stages require different methods of teaching. The better one's knowledge of a certain stage, the more effective one can become in meeting the various needs of the child at that stage.

Dewey's strong belief in education's ability to remake both society and humanity are still strongly felt among various educators today. His beliefs have a strong impact on educational school policies, as well as on various decision making mechanisms at and about schools. Dewey claims

that thinking about decisions should be experimentally approached. He believes that, despite personal differences, people can effectively work together. He further believes in the powerful effect of schooling in achieving the desired and ideal social order. Furthermore, he advocates teachers' freedom of any responsibility or accountability to parents or to the general public for what they teach. Social order, reform and progress can be truly guaranteed through education. Such beliefs and statements can help and encourage administrators and school policy makers to implant the real worth of a solid and healthy education in the minds of their students. They can encourage both teachers and students to engage most effectively and efficiently in such educational processes, without being restrained by all kinds of suffocating, conservative, old-fashioned and impractical concepts.

Binet's strong belief in qualitative differences has helped researchers and scientists to form what we today call qualitative research. Such a belief, however, can have another impact on administrators and school policy makers. Qualitative differences can necessarily mean that there are various students with various needs. These students can be thought of qualitatively and not quantitatively only. Qualitative differences require that administrators and policy makers study such differences and help find answers to meet the requirements of reducing differences among students.

Binet also discusses testing for social educational purposes, and testing to differentiate between levels of mental processes. Administrators and policy makers have to make sure that testing, especially standardized tests, are effectively and efficiently used in order to help determine students' various degrees of mental ability, and to be able to help students individually in the best possible way. Testing should not be used to

categorize some as excellent, and to stigmatize others as failures, rather to help and encourage students, each according to his natural ability.

The individual variations which Binet talks about help educators determine the individual differences in intelligence among various students. Such variations can mean that there are heterogeneous classes, which require that teachers use different materials to suit particular groups in class. Various groups of students require different kinds of attention and varied approaches. In order to sharpen the intellectual capacities of various students, teachers have to know what kind of students they have; sweeping generalizations and statements about “students” cannot be helpful.

Binet’s belief in the effect environments have on learning can help administrators and school policy makers make sure that students and teachers work in the best atmosphere possible. The better the learning environment is, the more conducive it becomes to effective learning. The location of the school, its structure, the relationships among the various individuals and constituencies involved with school performance, can all either help or detract from a suitable learning environment. It is the job of the administrators and policy makers in charge of the school to provide the best conditions for good learning.

Binet’s interest in prose memory and contextual learning help administrators and policy makers plan tests, curricula and various materials which encourage learning, teaching words in context and studying specific topics rather than memorizing individual words. Good learning must have a proper context; it does not take place in a vacuum. Separate statements or individual words, taken out of context, can become meaningless and take no permanent hold in the memory. Binet’s emphasis on prose memory versus word memory helps one think carefully about the context of the item learned.

Consistency with terms, as well as the agreement and consensus about the meaning and application of certain terms, can help create a more harmonious learning atmosphere. Administrators and policy makers have to make sure that certain words and terms in various teaching settings mean the same from place to place, and are applied correctly. Inconsistent and imprecise application of such terms, as well as attribution of different meanings to the same terms on different occasions, can create confusion and misunderstanding among students. Binet notices how various psychologists or officials give different meanings to the words “moron,” “imbecile,” and “idiot” inconsistently, causing a great deal of harm to individuals concerned. Administrators, policy makers and teachers should make sure that there is uniformity in the meaning and application of particular items taught at different schools.

Binet talks about different stages of intelligence and advocates different stages of development. Administrators and policy makers have to make sure that each student is taught according to his degree of intelligence and stage of development. When students are carefully and accurately assessed and given the appropriate materials, they can avoid a lot of frustration and failure. Binet also helps us understand intelligence as variable, having different modes and changing over time, composed of processes both complex and multiple. Such an understanding of the human intelligence can provide administrators and policy makers with the ability to introduce various curricula, techniques, teaching styles and testing methods, to correspond effectively to the various stages of intelligence among various students.

Binet’s three aspects of judgment can be most helpful for administrators and policy makers. The first aspect is direction, which basically indicates how one should focus on a certain task and calculate the

requirements of a solution strategy for a particular task or problem. The second aspect is adaptation, which helps individuals make the right choices among a variety of other ideas and choices. It also shows how one keeps refining their chosen ideas to arrive at the finest and most appropriate ones to fit task constraints. The third aspect is criticism; this is particularly important to help individuals develop the ability to evaluate certain solutions for certain problems, and to distinguish between effective solutions and those which fall short. It is a process which allows an individual to weigh the various aspects of even one particular solution, to take the good aspects and remove the inadequate ones. Binet's three aspects of judgment can help administrators and policy makers at school work diligently to guarantee that schools provide students with curricula, programs and activities which can keep them on task and help them become equipped with all necessary requirements for solution strategies, whether for tests in particular or life problems in general. Administrators and policy makers have to make sure that their students are given the chance to make choices. The atmosphere and setting of a school have to give students the ability to move freely, to make their own decisions and choices, to grow and progress, to become better problem solvers. Students have to be trained how to make their own judgments, how to choose what is right and avoid what is wrong.

Binet emphasized the individual differences in thought process; he also helped depict what children at various ages are really like, helped understand the nature of children at different ages. Such a contribution would be of maximum value to teachers in introducing the most effective and efficient instruction into their classes. Binet also talked about how effective instruction can progress from the concrete to the abstract. Such instruction should be challenging but not too frustrating for children. He

further spoke of how various opportunities can be provided to match the needs of children with high activity levels.

Watson's contributions to the field of education are strongly felt. His emphasis on empirical research, in which the psychologist views his environment as an outside observer, smoothens the way for qualitative as well as ethnographic research. Students have to be trained to become better observers and active learners of their environment. When a student is capable of objective observation of the surroundings in which he/she she can set himself or herself as an outside observer, one can become more capable of dealing with facts at a distance from emotional and subjective involvement.

Watson also emphasized the role of the environment and the social setting on learning. No doubt, such an emphasis is an opener to help teachers provide their students with the best environmental conditions for the learning process to take place. Schools should design classrooms with conditions most conducive to learning. Such environmental conditions can be improved on various levels; administrators and policy makers can do what is necessary to make the best relationships among students themselves, between teachers and students, and between teachers and administrators.

Watson's claim that students' skills can be conditioned requires administrators and policy makers at school to equip their teachers with the best training, the most advanced methodologies, to provide correct training in turn for their students. Teachers should be provided with the best means and training courses to help develop the skills of their students. They should be able to provide their students with various activities which can develop and strengthen their skills.

Rewards and punishments discussed by Watson as a transitional step to something more valuable. They are only the means to an end. The end has to be the development of students' belief in the true, intrinsic value of learning. Administrators and policy makers should make sure that rewards and punishments, if introduced at all in their schools, do not go beyond their function as a means. Teachers have to make sure that the students' relationship to learning is intrinsically motivated.

Watson's claim that the learning capacities of all individuals are similar, although arguable, can allow policy makers and administrators to become more daring, to introduce programs which are more vigorous and challenging to students. Such a claim can help administrators and policy makers design programs and make decisions which can meet the requirements of gifted and highly advanced pupils at early ages. His emphasis on observation helps administrators and policy makers think carefully about special education students. Through careful study and observation, one can always identify students with special needs, so that special programs can be tailored to meet these needs, and particular social and environmental settings can be meticulously designed to help them grow.

Learning through imitation is another factor emphasized by Watson. Administrators and policy makers have to make sure that teachers are good role models for the students. Teachers' values and personal predispositions can always influence students' own values and predispositions. Students are always inclined to copy and mimic their teachers' behavior.

Watson's belief that there are no social and cultural differences among various individuals can encourage administrators and policy makers to set programs and curricula which can help students overcome cultural relativism and ethnocentrism. Such a belief can encourage administrators and policy makers to work on a more global education, capable of providing

students with a more farsighted and broader vision and help promote a more universal culture. Watson's impact on learning foreign languages would be as useful; students should be encouraged to learn more foreign languages in order to overcome cultural barrier, which have often operated as barriers between various individuals of different nationalities and cultures.

Watson advocated the behaviorist perspective, and insisted that scientific objectivity and experimentation into the study of psychological phenomena should be introduced. He also emphasized the need for focusing scientific inquiry on observable behavior. He also claimed that past experiences are most essential to behavior, and this led to his laws of "frequency" and "recency," the idea that children can be looked at as "blank slates", and that one needs to focus carefully on external, observable events to help them grow properly. Although some of such claims and statements are arguable, and can be sometimes controversial, administrators and policy makers can make positive use of them in dealing with children; as "blank slates," children would be tender and flexible, and administrators and policy makers must make sure they are not exposed to anything harmful or potentially damaging.

Watson's description of the contiguity importance between stimulus and response can certainly help administrators and policy makers make sure that teachers at their school do their best to meet deadlines regarding tests, papers, or other kinds of commitments. If teachers expect their students to be responsive to their instruction, they must make sure that their stimuli are carefully studied and weighed. Watson also believes that past as well as present events have strong influence on an individual's behavior. Administrators and policy makers must make sure that there is a continuity and coherent relationship among various learning experiences in schools.

They should ensure that what is taught in kindergarten or first grade leads naturally and progressively to achievements in the tenth or eleventh grades.

Administrators and policy makers can also take good advantage of Watson's assertion that drill and practice, various methods to break bad habits, and close attention to individual behavioral consequences. They can make sure that teachers target bad habits in their students, and work on eliminating them through proper drills and exercises. They can also target the good behavior of their students and encourage it.

Conclusion

It is hard, perhaps even impossible, to be just to such renowned developmental psychologists in such a brief review. This paper, however, has attempted to touch upon some of the contributions of Baldwin, Dewey, Binet and Watson in any field of pedagogy which administration and policy studies might involve. No doubt, their research and scientific inquiries and discoveries will continue to reflect themselves strongly for generations to come. Their attempt to discuss and describe the various stages of childhood, and specifically the distinguishing characteristics of each stage, have been and will continue to be of great value to schooling and school officials. In order to take the best advantage of such valuable contributions, one has to contribute more of his/ her time and energy in order to dig deeper, and through a closer reading of their writings and a better understanding of their discoveries, make the best application of these findings to modern education systems worldwide.

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