

The Desire to Know: Arnold's Contribution to a Psychological Conceptualization of Academic Motivation

F. Ruiz-Fuster

Abstract—Arnold's redefinition of human motives can sustain a psychology of education which emphasizes the beauty of knowledge and the exercise of intellectual functions. Thus, education instead of focusing on skills and learning by doing would be centered on 'the widest reaches of the human spirit'. One way to attain it is by developing children's inherent interest. Arnold takes into account the fact that the desire to know is the inherent interest which leads students to explore and learn. She also emphasizes the need of exercising human functions as thinking, judging and reasoning. According to Arnold, the influence of psychological theories of motivation in education has derived in considering that all learning and school tasks should derive from children's needs and impulses. The desire to know and the curiosity have not been considered as basic and active as any instinctive drive or basic need, so there has been an attempt to justify and understand how biological drives guide student's learning. However, understanding motives and motivation not as a drive, an instinct or an impulse guided by our basic needs, but as a want that leads to action can help to understand, from a psychological perspective, how teachers can motivate students to learn, strengthening their desire and interest to reason and discover the whole new world of knowledge.

Keywords—Academic motivation, interests, desire to know, educational psychology, intellectual functions.

I. INTRODUCTION

WHICH is the children's motivation to learn? Why do they want to know? These questions are related to the psychological definition of motivation. It has been defined as a "force that drives and orients individuals' activities" [1]. It is seen as an impulse that guides our conduct. Nevertheless, psychologists have conceptualized motivation differently according to the distinct theories. The diverse manners of understanding motivation have influenced education and learning methodologies of how to improve student's performance.

II. REVIEW OF SOME PSYCHOLOGICAL THEORIES OF MOTIVATION

Behaviorism explains our conduct with incentives and rewards [2]. It is based on the homeostatic theory which defends that the lacks of our organism generate needs. These needs create impulses which, in turn, originate conducts. The incentives given to that behavior may increase it and can finally rebalance the initial lack [1]. Thus, behaviorism

considers that our conduct is motivated with external incentives and rewards.

On the other hand, psychoanalysts sustain that instincts are the basis of our behavior. It also reflects the homeostatic theory: a need provokes disequilibrium on our organism and hence an impulse is addressed to maintain the stability of our organism [1].

Finally, the humanistic theories are centered on the basic needs which are hierarchically organized and focused toward self-realization. These theories sustain that there are few basic needs which, once satisfied, give place to secondary needs. These needs guide our behavior toward its satisfaction. Maslow asserts that secondary needs only arouse when primary needs are satisfied; and that cognitive functions and needs are not present in everyone [3].

III. ARNOLD'S CRITICISM

Arnold analyzes these psychological theories of motivation explaining the consequences of assuming that 'there are only a few basic drives motivating human as well as animal action' [4]. Thus, there is no place for a *desire to learn* as an inherent human factor which can guide human learning. On the contrary, it is seen as 'alien to human nature' and so it must be artificially aroused and maintained.

Focusing on incentives and assuming that a 'special motive or a special driving force is necessary for learning', have made psychologists investigate 'the effect of biological drives'. Hence, they have also left curiosity apart considering that the desire to learn is not inherent to human nature and learning should be motivated by 'biological drive or a drive-like emotion' [4].

According to Arnold, these psychological theories of motivation have consequences on learning and on how teachers try to motivate their students. Understanding how interest is aroused and which motives guide students to learn will definitely change the way of teaching:

"If learning must be started and maintained by a biological drive, it would be well to teach in such a way that this drive is active when the child is to learn. One would have to provide sweets and other incentives routinely and dole out rewards and punishments that are, if possible, directly connected with the child's biological needs. If, on the other hand, the desire to know and learn is inherently active in all children and does not have to be aroused by some bona fide biological drive, one can try to find the conditions under which this desire to know

Ruiz-Fuster, F. is with the University of Navarra, Pamplona, 31009, Spain (e-mail: fruiz.2@alumni.unav.es).

will be most easily aroused and maintained” [4].

The different conceptions of motivation have also an influence on the consideration of human functions. If drives and instincts guide human functions, those functions become inherently passive. Human beings are assumed to be inert, inactive, moved not by themselves but by another motor named drives or even needs. Those needs and the required satisfaction, should allow the exercise of all human functions. If the desire to know is not considered as a human need, which can be experienced by everyone, then there is no necessity of developing the functions of thinking, reasoning and judging [4].

In referring to Maslow, Arnold asserts that the secondary drives are an ‘accidental product of the attempt to satisfy primary drives (...) or that secondary needs and drives appear as the result of maturation as soon as primary needs are satisfied. But Maslow recognizes only a few such secondary needs (e.g. security, love, esteem, self-realization) and the desire to know is not among them’. Thus, psychological theories of academic motivation have been focused on satisfying some basic or instinctual need which did not include the desire to know. Thereby, following Arnold, some external incentive should be given to children to get to learn school contents and teaching should always be adapted to children’s biological needs. Such assumptions explain the use of external motivation for many years, which on the contrary have had unwanted effects, “lowering the interest for the task and the sense of autonomy” [6]. Nevertheless, Arnold asserts that ‘even the infant is interested in what goes on around him, though he may be completely satisfied after his bath and feeding’ [4]. The desire to know is inherent to human nature, in such a way, that infants are guided by curiosity and interest to get to know the world. These functions are not passive, as it would be understood from the instinct drive conception. They are, on the contrary, active functions not submitted to other motors:

“To respond to anything he must have functions that are inherently active, functions that do not have to be driven by hunger, thirst or sexual desire but go into action as soon as there is an opportunity for them to act. If that were not so, we would be asleep or at least completely unable to respond to anything unless we were hungry or thirsty or in the grip of some other physiological desire” [4].

Hence, human functions are inherently active and require to be exercised or otherwise will not be developed. Moreover, ‘without guidance they will be restricted to concrete matters and will develop neither in range nor in depth’ [7].

To sum up, Arnold emphasizes the role of the *desire to know* trying to explain the psychological theories of learning which understand learning as the satisfaction of a biological or instinctual need cannot sustain this motivation, this desire, which should be conveniently taken into account by teachers, as “no outside incentive is necessary once he has developed an inherent interest that is fed by his inborn desire to know, to think, to explore and to learn” [4].

IV. MOTIVES AND LEARNING

A. Motives as Causes

Arnold’s definition of motives and hence of motivation could sustain a psychological theory of motivation that emphasizes the *desire to know* as inherent to all human beings. This new conceptualization would change, in practice, the orientation of teachers when trying to improve the students’ academic motivation, i.e. giving the child a chance to discover the peculiar joy which is found in thinking and reasoning [4].

What is a motive? Arnold asserts that a ‘motive is a want that leads to action’ [6]. This definition is focused on the fact that a person must ‘want something before he will make any effort to achieve it’ [6]. Furthermore, a want is derived from something appraised as good or bad, from its attractiveness or repulsiveness to us here and now [7].

When something is appraised as good, a person may decide to act in such a way to get it. Hence a motive has been developed and it generates a tendency to action.

Motives are a tendency to action which, when repeated, originate motivating attitudes which consist on ‘habitual tendencies to engage in overt action which is either constructive –positive- or non-constructive –negative’ [7].

Arnold’s theory of motivation has advantages towards those psychological theories based in instincts and needs. We do not need to ‘derive the thousand-and-one motives of human adults from a few physiological drives; nor do we have to postulate secondary drives or motives’ [6].

Arnold distinguishes motives from drives with an example:

‘hunger is not necessarily a motive. Hunger is an urge toward food which compels thinking about it, promotes the attempt at getting it, and is accompanied by organic sensations (hunger pangs). It does not become a motive until I decide on action. A man who is on a hunger strike is certainly hungry, but his hunger is not a motive for his refusal to eat (...) the man on a hunger strike evaluates going without food as good (for the time being) and so refuses to eat. The student appraises the PhD in his specialty as good and decides on the course of action that will lead to it’ [7].

Hence, ‘motives are active from the moment a man has decided on the appropriate action until his goal is accomplished, even though that action may not be continuous. For this reason, a motive need not be “aroused” by a picture before it becomes active’ [7].

This concept of motives and motivation allows a more complete understanding of human behavior than the one derived from drives and instincts.

Motives as ‘wants that lead to action’ do not require drawing upon instinctive energy sources to arouse the motivation to learn. Motives have an ‘inherent dynamism’ that can explain academic motivation. Moreover, Arnold poses the general neurological basis of such motives, which justifies the non-requirement of instinctual energy: ‘a want or desire is a tendency to action that is initiated by appraisal and is mediated by definite brain structures and circuits which excite motor nerves and result in muscular contractions. And the energy

needed for nervous conduction and muscular work is derived from food and needs no instinctual source’.

B. Motivation and the Desire to Know

The definition of motive as a ‘want that leads to action’ can sustain the so-called desire to know. Something is seen as interesting, and it is initiated a tendency to learn it and to understand.

There is a want that guides us to acknowledging something and makes us want to learn it. Hence, the knowledge itself can be appraised as good –and interesting– and can guide and move our behavior towards learning. The *desire to know* becomes our motive for action. The satisfaction found in thinking and reasoning, in exploring and learning constitutes the motive of students. This assumption requires a great effort of teachers to generate that interest for knowledge, trying not to rely on external incentives but on intrinsic motivation. This effort should be based on the ‘peculiar joy’ experienced when developing the intellectual functions:

“The exercise of any function is pleasant as long as it can be done without strain. Hence, we like looking and listening when there are pleasant sights or sounds; we like running or dancing. Emotions, like other functions, are aroused as soon as the proper conditions are given: we love when we meet someone or something lovable, we are angry when frustrated, afraid when threatened. To give in to an emotion is pleasant, just as the exercise of any other function is pleasant. (...) The difference between knowledge functions and appetitive functions lies not in the fact that appetitive functions urge to action or bring pleasure –knowledge functions do the same. Rather, the appetitive functions differ in that they urge the individual toward the object that can satisfy them” [4].

Thus, teachers should take into account the intrinsic reward of tasks and learning itself while offering challenges and while explaining the ‘world of poetry, literature, science, art and music’ [4].

C. Values, Interests and the Desire to Know

Furthermore, Arnold distinguishes between values, motives and interests. This distinction may help to understand how different factors are interrelated and have an influence on the students’ academic motivation.

Arnold asserts that values and motives judge something as desirable. They indicate if it is valuable and good. Nevertheless, values, unlike motives, do not generate a tendency to action. Values become motives when it is included a *choice of action*: ‘a value will become a motive when we decide to possess it’ [7].

Motives include values and interests. Values do not necessarily include motives but it does include interests. Interests are a specific evaluation related to the *desire to know*: interest ‘usually spring from a judgment that this is good to know’ [7]. Values are referred to something judged as desirable, even though it does not influence our action; and interests consist on a specific judgment related to knowledge.

Moreover, interests can become motives when we decided to know what we have appraised as good to know, when we set the means to acquire the knowledge judged as desirable. This difference is relevant in relationship with the *desire to know*. Interests are a specific appraisal of something considered as valuable. When we get to know what we consider good to know, namely when action is included, interests become motives and lead us to action.

V. RE-UNDERSTANDING OF ACADEMIC MOTIVATION

Arnold’s proposal can enlighten today’s perspective towards academic motivation. Interests are the psychological construction of the *desire to know*. They are aroused when something is desirable to know.

Her perspective of academic motivation relies on the intrinsic motivation of knowledge and learning. It should not be emphasized the rewards and incentives of learning but the joy derived from the knowledge itself. This task relies primarily on the teachers’ effort of showing children the wondering of the world around them:

‘Once the child discovers that hated arithmetic leads to the mysterious world of numbers (and not just to making change or measuring board), that reading is a stepping stone to a whole new universe that can be explored (and not just a necessary tool for getting needed information in a “social situation”), once he realizes that composition – hated word!- is the key to his own imagination made fruitful by his regain (and not merely a way of communicating in a “democratic society”), he has gained access to adventures that never end. Incidentally, he will learn to make change, acquire information and communicate but it is essential that he should not be restricted to these practical and concrete operations but should find his way into the widest reaches of the human spirit’ [4].

Arnold considers that skills –acquiring information, communication, etc. – are necessary but that student’s should not be focused only on these practical activities. Nevertheless, nowadays the prominent educational perspective is focused on learning skills, emphasizing the “know-how” [8]. This new paradigm may have advantages and disadvantages but has undoubtedly invaded the educational system [9].

Knowledge has to have an application, has to derive always on something tangible and evaluable. Students have to develop skills and knowledge is a means to acquire them. The report elaborated by Jacques Delors in 1996, emphasizing four basic skills to learn in school –learn to learn, learn to do, learn to live together and learn to be– sets the definite educational change which has influenced every educational level, including the university level.

Some authors [10] recognize the hazards of this approach which, in turn, devalue the acquisition of knowledge. They assert that emphasizing the learning and teaching of skills at school gets the focus on the practical application of knowledge, on the possibility of evaluating those skills and the obtained results. However, it forgets the intrinsic value of knowledge and learning. Thus, the desire to know, exposed by

Arnold already in 1956, has once again been forgotten. Rescuing her psychological description of motives, values, interests could give a basis for this inherent function of human: the *desire to know*.

From a psychological perspective, the understanding of motives and motivation is crucial in teacher's performance. How do they try to motivate the students? Do they always use incentives and rewards? How interested are teachers for their own subject? Those questions are posed to make reflect those professionals who are dedicated to teach. Their own assumption may, in one way or another, influence their practice. These perspectives are narrowly connected with *intrinsic motivation* which is a fundamental concept in educational psychology [1], [2].

From the educational perspective, we also find some authors who emphasize the exercise of the intellectual functions, considering them as ends and not as means [11]. Thereby, interests should be developed so to find the intrinsic value of work and tasks [12]. Thus, the interest and the *desire to know* have not been forgotten at all; neither the intrinsic joy of knowledge, considering it as an end and not considering it as something useful for its applicability. If we consider thinking, reasoning, judging as human functions, teachers should also help students and guide them to reflect, think and judge.

The notion of interest [11] is also relevant in educational perspectives. The attractiveness of the different fields of knowledge should be shown while trying to awake intellectual interests.

VI. A NEW METHOD OF MEASURING MOTIVATION

Arnold did research on the motivational field [7]. She re-elaborated a scoring system of a psychological test –the Thematic Apperception Test by Henry Murray– to measure motivation and predicting achievement. This scoring system was called Story Sequence Analysis. She used the stories from TAT to evaluate motivation:

“Stories betray a man's attitudes (both emotional and intellectual) and the way in which they influence him to act: they reveal his motives. And since motives are blueprints for action, it is possible to infer from them what he will do in real life. The problems he sets himself in the stories he tells, he will resolve in real life according to the way in which he evaluates the story solution” [7].

Arnold applied this scoring system and did evaluate people's motivation and attitude towards life [13] without restraining it to academic motivation. She took into account that the motivating attitudes ‘are revealed in stories that have a plot (which describes action) and an outcome (which shows whether this action is likely to be chosen by the storyteller). Since these attitudes are motivating attitudes, they do predict action’ [7]. Moreover, her scoring system was used in different dissertations and theses to examine the underlying psychological factors; attitudes and motivations. This psychological test could be of use in measuring academic motivation. The educational use of this scoring test could help teachers understand their students' motivation toward learning

and to help them by creating new interests and by promoting an intrinsic motivation.

VII. CONCLUSION

Further research should be driven to support Arnold's assertions. Arnold's perspective can contribute to the theorizing of academic motivation although more research is required. However, her discussion is a theoretical contribution which influences the practical field of education, as did once the behavioral perspective. As the concepts exposed by Arnold are not as tangible as the incentives and rewards proposed by the behaviorist perspective, research would require working with operative dimensions derived from the *desire to know* and the *interests*.

The desire to know could be included in some recent theories reviewed in [5] which refer to three different motivations: the extrinsic motivation, the intrinsic motivation and the internalized motivation. Further research could signalize where to include this desire to know. Moreover, Arnold's definition of motives may change teacher's perspective on their students learning. They should try to encourage them to see the interest in the content they are explaining and find joy in it. This approach may be challenging for teachers who sometimes can find it easier to give rewards to children's performance.

Understanding the desire to know as an interest, as something judged as desirable to know, can enlighten educational perspectives and methodologies, decreasing the emphasis on extrinsic motivation and focusing on the intrinsic one.

Overcoming instinctive drives will allow us not to restrict children's horizon to ‘sheer sensory satisfactions’ while missing the ‘joys that are most truly human’ [4]. Moreover,

“if we are willing to acknowledge that the desire to know and learn is as basic and as active as any instinctive drive, and if we encourage those we teach in their quest for truth, we are working toward true freedom in a realm that knows neither limitation nor satiation”.

To sum up, we can conclude that Arnolds' theoretical concept of the *desire to know* may serve as a basis to academic motivation helping in the elaboration of educational and psychological interventions to improve their motivation which will inevitably have an effect on students' performance.

REFERENCES

- [1] G. Sampascual Maicas, *Psicología de la educación*. Madrid: UNED, 2009, pp. 286-289.
- [2] J. González-Pérez & M. J. Criado del Pozo, *Psicología de la educación para una enseñanza práctica*. Madrid: CCS, 2015.
- [3] A. H. Maslow, *Motivación y personalidad*. (Recurso electrónico), Madrid: Ediciones Díaz de Santos, 1991.
- [4] M. B. Arnold, Motivation and the desire to know. *Education*, vol. 77, 1956, pp. 220-226.
- [5] M. C. González-Torres, La motivación académica. Sus determinantes y pautas de intervención. Pamplona: EUNSA, 1999, pp.154-158.
- [6] M. B. Arnold, Motives as Causes, *Journal of Phenomenological psychology*. Vol 1(2),1971, pp.185-192.
- [7] M. B. Arnold, *Story Sequence analysis: a new method of measuring motivation and predicting achievement*. New York; London: Columbia University Press, 1962, pp. 32-44.

- [8] A. Zabala & L. Arnau Belmonte, *11 ideas clave: cómo aprender y enseñar competencias*. Barcelona: Graó, 2007.
- [9] J. G. Mora, *Formando en competencias: ¿Un nuevo paradigma?* Barcelona: Fundacion CYD, D. L., 2011.
- [10] J. Palés-Argullós, M. Nolla-Domenjó, A. Oriol-Bosch & A. Gual, Proceso de Bolonia (I): educación orientada a competencias Bolonia process (I): outcome-based education. *Educación Médica*, Vol 13, Iss 3, pp 127-135, 2010.
- [11] A. Llano, *La universidad y el tiempo*. Spain: Universidad Católica Santo Toribio de Mogroviejo, 2012.
- [12] L. Polo, *Ayudar a crecer: cuestiones de filosofía de la educación*. Pamplona : EUNSA, 2006.
- [13] M. B. Arnold, *Screening candidates for the priesthood and religious life*. Whitefish: Literary Licensing, 1962.

Ruiz-Fuster, F. is in the University of Navarra, doing a PhD in personality psychology. Ruiz-Fuster was born in Barcelona, Spain, in 1993 and graduated with honors from Pedagogy in the University of Navarra, Pamplona, Spain, 2016. Ruiz-Fuster did a master's degree in Social Sciences Research, Institute of Culture and Society, Pamplona, Spain, 2017.