How much Autonomy do Students Need?

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Abstract

Didactical approaches like inquiry based education is sometimes propagated, because it is assumed to increase student interest by allowing them to engage in self-selected endeavors, i.e. it gives them autonomy [1]. The self-determination theory of Deci and Ryan poses autonomy as one of three basic needs for intrinsic interest .

Autonomy is framed differently – as an educational goal – in the developmental, psychological literature [3]; children are to become autonomous adults.

In this theoretical paper, I will explore the notion of autonomy and the perception of autonomy as a central mediating concept. Education needs to support children to be able to perceive autonomy; this perception of autonomy can occur in highly pre-structured environments. Thus, the perception of autonomy is seen as a central dialectical concept, which negotiates the a priori need to feel as the locus of control with the developmental goal to become a self-directing, autonomous adult. For education, this means that we need to (a) carefully explore ways in which we can support the development of perceiving potentials of autonomous action in a situation, and (b) to further explore in which way seemingly inconsequential aspects in a highly structured learning environment might allow students to feel autonomous.

1. Introduction

In this paper, I discuss different framings of autonomy in education in order to address the implication, the developed notion of autonomy implies for setting up learning environments. In the following, I will first discuss the general meaning of autonomy, and then move on to explore two very different theoretical constructs which use autonomy in educational theorizing. I will introduce the concept of perception of autonomy to bridge the two presented approaches. Next, I will discuss what that implies for learning environments.

2. Notions of autonomy

The word auto-nomy stems from the Greek word autónomos, which combines auto/self with nomos/law i.e. self-governing. It is often seen in opposition to heteronomy, i.e. governed by someone else. Autonomy and heteronomy are intimately related to the question of what governs one's action (the law I set myself, the law, which someone imposes on me). In moral philosophy, autonomy is seen as prerequisite for the possibility of free and thus moral action. Free and moral action is tied to one's beliefs, desires and interests, and has thus been discussed in conjunction with decisions of all kinds. In brief, in philosophy autonomy has been an important notion in the discussion of (moral) action, the relation of will and deed, of intentional action for which actor can be hold responsible. This discussion generally explores ethical questions concerning "humans" – implicitly adults, who can be seen accountable in the light of high standards of rationality and for whom the possibility of autonomous thinking (if not action) is presupposed.

But is this presupposition warranted for children and teenagers? Developmental psychology frames "autonomy" as a multifaceted developmental goal. Steinberg [4] and Beckert [5] distinguish four different kinds of autonomy which all have their own developmental pathway. First, there is the task of attaining emotional autonomy that is to become independent from one's parents, while retaining a solid relationship. (The latter stresses that emotional independence or autonomy does not imply lack of stable social relations and relations of caring.) Second, young people need to become autonomous in their behavior, they should make their own decisions (instead of conferring them to some "wiser") and act on them. Thus their behavior should be active and independent, in contrast to e.g. automatically conforming with their peer group. Third, there is cognitive autonomy also termed self-reliance, which concerns self-perception. Young people should develop of feeling of being in control of their own life, and of being able to make their own decisions. Fourth, there is value autonomy, describing the developmental goal of developing one's own moral, political and spiritual thinking.

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Summing up, this approach sees autonomy as educational, developmental goal, which has to be attained going through various learning processes. In this perspective, autonomy is not something children have and start out with, but something which has to be cultivated.

This differs radically from the notion of autonomy used in self-determination theory, a motivational theory [6,7]. In motivational theories, autonomy features as a theoretical construct describing the possibility of an agent to (freely) decide between different options. This freedom of choice is seen as an important ingredient for motivational processes: (a) If I decide freely (autonomously) for X, I choose it. (b) This is an act of commitment. (c) This commitment makes X part of one's self. (d) This increases the likelihood of me choosing X again at a later point in time. (e) Thus, I might develop a stable interest in X. In brief, (Experience of) autonomy leads to interest. In this account, autonomy is the starting point of a certain development, it can also be seen as a didactical element.

A theory, which explicitly integrates autonomy as central motivational construct is Deci and Ryan's self-determination theory. It stipulates autonomy, competence and social relatedness as basic psychological needs, the fulfillment of which creates experiences which are conducive to establish and maintain interest. In particular, it distinguishes different forms of extrinsic motivation by the measure of autonomy provided; whether the locus of control is considered outside one's self, or whether one has integrated the norms, the activities or even values which make a certain action desirable to varying degrees into owns own self-concept. "The concept of autonomy is a theoretical rather than empirical one, though it has clear empirical consequences. Autonomy connotes an inner endorsement of one's actions, the sense that they emanate from oneself and are one's own. Autonomous action is thus chosen, but we use the term *choice* [..] as an organismic concept anchored in the sense of a fuller, more integrated functioning. The more autonomous the behavior, the more it is endorsed by the whole self and is experienced as action for which one is responsible." [2: 1025] Some publications stress the notion of *need* for autonomy (competence and relatedness), which carries a subjective point of view with respect to the perception of their fulfillment. Other passages like the quotation above, seem to imply a more objective point of view, of a provision to act autonomously in a situation. In any case, this theory posits autonomy as one originating factor for the development and maintenance of interest.

In conclusion, we find three different conceptions and embeddings of autonomy:

(1) An "objective" autonomy: a particular feature of a supporting context. This context affords different choices, it allows for a critical stance and independent thinking, and it supports the experience of autonomous action.

(2) Experience of autonomy, "subjective" autonomy: a consciously experiencing subject has a particular perception of the situation they find themselves in. Only the perceived autonomy can fulfill a need for autonomy.

(3) Autonomy as a developmental goal ("didactical project"): Over the course of their experiences, subjects should become autonomous human beings; adults, who can act autonomously.

The three conceptions can be seen as distinct yet intimately related: Contexts affording autonomous actions need to be perceived as such for people to engage autonomously, and the perception of autonomous action supports the gradual integration of autonomous action into the self-concept. The mediating central concept for educational purposes is students' perception of autonomy.

3. Autonomy perception and education

In the last decade, inquiry based science education (IBSE) has been promoted (e.g. [8]) to foster student interest and engagement in science. The idea was that IBSE "stimulate[s] students' interest for learning and cultivate[s] their autonomy" [9]. It is assumed that IBSE motivates students, since they can "do" themselves (experiments, etc.), and since they work with authentic problems (if they are provided by the IBSE in question), and that the authenticity of the problems would have made them autonomously choose to work on the problem, if they had a choice. It is also assumed that IBSE leads to a deeper learning, since students "do" themselves, i.e. they autonomously construct the relevant knowledge, and they formulate explanations on their own. Thus the promises of IBSE are intimately tied in with students' autonomous stance.

Yet at the same time, studies like Minner [1] and Hattie [10] call into question, whether IBSE is more effective than alternative approaches. Kirschner and his colleagues [11] explored possible reasons why approaches which afford autonomous action might fail to live up to their promise. They conclude that the cognitive requirements to perform well in open situations, might be too high. In open situations students have at the same time to develop a plan, adhere to the plan and solve the particular problem at hand. This might be simply too much for the working memory. In general this discussion points to the difference between "objective" autonomy – the affordances provided by a learning situation – and the "subjective" autonomy, the perceived autonomy, which is dependent on learner characteristics and perception of possibilities.

Moreover, the perception of autonomy need not necessarily depend on some assumed objective educationally relevant autonomy. For students the feeling of control, of choice, of autonomy can in principle be provided by educationally superficial aspects of a learning situation. For instance, in a highly structured session on exploring properties of objects (how far can an object roll, what are its properties like color, shape, texture etc.) elementary school students were asked to bring along an object of their choice from home, which they then used in their experiments, and which they compared with each other. [12]. It is an open question, whether the possibility to engage with their own, freely chosen object, the possibility to interact with each other, etc. or all at once led to a high level of engagement.

In general, we need further research to explore, on which bases children of different ages form their perception of autonomy. Furthermore, we need to (a) carefully explore ways in which we can support the development of perceiving potentials of autonomous action in a situation, and (b) to further explore in which way seemingly inconsequential aspects in a highly structured learning environment might allow students to feel autonomous. Methods like IBSE need to take into account the learning needed to navigate the open learning spaces they offer, slowly guiding students to embrace autonomous activities in open, unstructured learning situations.

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