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FROM PROJECT TO INTENTION: AN ACTIVITY-THEORETICAL CRITIQUE OF PROJECT-BASED EDUCATION IN VETERINARY AND HEALTH SCIENCES

Modes of life, needs, and radical-transformative agency as grounds for an alternative educational model

Federico de la Colina Flores[1], Heriberto Rodríguez Frausto[2], Tzitzi de la Colina García[3], Paul Alexis de la Colina García[4].

[1]Universidad Autónoma de Zacatecas. México. https://orcid.org/0000-0002-8890-2863
[2]Universidad Autónoma de Zacatecas. México. https://orcid.org/0000-0001-9608-5843
[3]Colegio Edison A.C. Guadalupe, Zac. México. https://orcid.org/0000-0001-8502-3903
[4]Colegio Edison A.C. Guadalupe, Zac. México. https://orcid.org/0009-0000-1666-1469

ABSTRACT: *Project-based education has become one of the most influential reform idioms in contemporary schooling and higher education. its defenders emphasize authenticity, collaboration, and practical transfer. yet the project form also carries a history and a social logic that are rarely examined in sufficient depth. this article critically compares project-based education with an alternative centered on the development of intention within an educational model grounded in activity theory. drawing on recent work that presents activity theory as a pedagogical foundation, develops the concept of mode of life for veterinary education, and reconstructs needs and wants as relational dynamics, the article proposes that intention should be defined as the planning of activities aimed at producing objects that satisfy needs arising from desired modes of life. on this basis, project-based education is shown to be limited not only pedagogically but ideologically. historically, the project method emerged through vocational, industrial, and managerial traditions, and in contemporary educational discourse it is readily aligned with neoliberal capitalist tropes such as competition, commodification, profit orientation, and marketized realism. by contrast, intention is oriented toward collective authorship, need satisfaction, and the transformation of life conditions rather than toward bounded deliverables. the article argues that intention offers a stronger basis for veterinary and health sciences education and research because it integrates object orientation, collective agency, ethical responsibility, and community accountability. it concludes that project techniques may remain useful as subordinate action forms, but they should no longer define the educational model as a whole.*

KEYWORDS: *intention development, activity theory, project-based education, modes of life, neoliberal ideology*

INTRODUCTION

Project-based education is widely presented as an antidote to passive instruction. It promises engagement, authenticity, and application. Meta-analytic and review literature shows that project-based learning can improve academic achievement and can support affective and behavioral outcomes, including engagement, confidence, and practical problem solving [1-2]. In veterinary and health-related fields, published cases and reviews likewise report favorable student responses, including in anatomy and other practice-oriented settings [2-3]. These findings matter and should not be dismissed. They demonstrate that learning organized around complex tasks and tangible outputs can be educationally powerful.

Yet the educational status of the project is more ambiguous than its current popularity suggests. Historical scholarship shows that the project method did not emerge as a timeless pedagogical truth. It has a long genealogy linked to architecture, engineering, agriculture, manual training, and industrial education, and its twentieth-century generalization involved conceptual slippages and ideological redefinitions [4-5]. Contemporary critiques further suggest that project-based learning can easily absorb neoliberal-capitalist assumptions,

especially when "real-world" learning is equated with competition, entrepreneurialism, profit-seeking, and the commodification of student-made artifacts [6]. The broader literature on projectification reinforces this concern by showing how activities once organized through more stable collective functions are increasingly reframed as temporary projects, with consequences for work, identity, and institutional life [7-8].

This article argues that the limitations of project-based education are not accidental. They are rooted in the project form itself. The article therefore advances an alternative category, intention, to serve as the organizing principle of an educational model grounded in activity theory. Intention is not treated here as a private mental state or a vague desire. It is reconstructed as a collectively authorable and revisable plan for activity, oriented toward producing objects that satisfy needs arising from desired modes of life. This reconstruction draws on three recent contributions. The first presents activity theory as a pedagogical foundation for educational models and foregrounds object orientation, mediation, hierarchy, and development [9]. The second develops mode of life as a foundational concept for veterinary education and argues that veterinarians and animal scientists are mediators and designers of modes of life [10]. The third reconceives needs and wants as relational dynamics emerging through activity, mediation, and historically formed life conditions [11].

The thesis defended here is that an intention-centered educational model is superior to a project-centered one because it is better aligned with activity theory, because it more adequately links education to the satisfaction of needs within desired modes of life, and because it more explicitly resists the ideological reduction of education to capitalist project logic. The stakes are especially high in veterinary and health sciences, where educational objects are inseparable from welfare, care, ecology, and public accountability.

PROJECT-BASED EDUCATION: ACHIEVEMENTS AND CONCEPTUAL LIMITS

Project-based learning has accumulated substantial empirical support. A meta-analysis by Chen and Yang found a medium-to-large positive effect of project-based learning on academic achievement relative to traditional instruction [1]. A recent review of tertiary health professions education similarly reported favorable cognitive, affective, and behavioral outcomes, highlighting improvements in critical analysis, engagement, confidence, and perceived readiness for professional contexts [2]. A veterinary anatomy study likewise reported that project-based learning fostered active participation and was positively received by students [3]. Taken together, these findings justify taking project-based education seriously.

At the same time, the same literature reveals a conceptual problem. Project-based education is often defined so broadly that almost any activity involving extended work, collaboration, or product creation can be counted as a project. Historical analysis shows that this ambiguity is not new. Knoll demonstrated that the project method has a long and heterogeneous history and argued that twentieth-century reformers, especially after Kilpatrick's 1918 essay, blurred a specific method of constructive work into a generalized philosophy of education [4]. Burlbaw, Ortwein, and Williams similarly note that project-based classroom instruction was co-opted from agriculture and industrial arts and that its emphasis on "real-world" problems and measurable outcomes has remained central to its modern forms [5].

This history matters because it reveals that the project is not a neutral pedagogical container. It arose in contexts where the central educational concern was the production of bounded outcomes through organized action. Even when the rhetoric of democracy and student initiative was added, the form remained strongly tied to deliverables, performance, and demonstrable results. Dewey's reservations are instructive here. As reconstructed by Knoll, Dewey insisted that a genuine purpose differs from a mere impulse because it is transformed into a plan and method of action, and he did not accept Kilpatrick's broad tendency to define virtually any purposeful act as a project [4]. This distinction anticipates the argument of the present article. What deserves pedagogical centrality is not the project as such, but the transformation of desire into a socially grounded, collectively guided, and critically revisable intention.

Project-based education therefore has two sides. On one side, it can break the passivity of lecture-centered teaching and connect theory with practical engagement. On the other, it can obscure the educational object by subordinating learning to the achievement of temporally bounded deliverables. Once that happens, the educational process is easily assessed according to completion, performance, and visible output alone. The result

is pedagogical productivity without sufficient inquiry into why the object matters, whose needs it serves, what forms of life it sustains, and how it transforms those who participate in it.

THE IDEOLOGICAL ASSOCIATION BETWEEN THE PROJECT FORM AND CAPITALISM

The claim that the project-oriented approach is ideologically associated with capitalism should not be made casually. It needs both historical and conceptual support. Historically, the project form is deeply linked to vocational and industrial traditions. Knoll's history traces the project's development through architecture, engineering, technical universities, manual training, industrial arts, and agriculture before its diffusion into general education [4]. Burlbaw and colleagues likewise underline its co-option from agriculture and industrial arts into wider educational discourse [5]. This origin does not prove that the project is intrinsically capitalist, but it does show that the project form developed in close relation to the organization of productive activity and the training of workers and professionals for materially bounded tasks.

The more direct ideological link emerges in contemporary analysis. Fine argues that project-based learning, despite its progressive promise, often takes up neoliberal-capitalist tropes such as individualism, competition, profit maximization, the commodification of learner-made artifacts, and market-based solutions to social problems [6]. Her critique is especially important because it does not deny that project-based learning can be engaging or equitable in some contexts. Rather, it shows that the project form readily defaults toward capitalist realism unless it is explicitly reoriented through critical praxis.

The literature on projectification strengthens this point. Packendorff and Lindgren define projectification as the process through which activities traditionally carried out in more stable functional forms are increasingly approached as projects [7]. What begins as a practical organizational device can become a cultural and discursive regime. In contemporary higher education and academic life, Lindgren, Packendorff, and Berglund show how projectification contributes to "projectified selves" in neoliberal society, producing tensions around recognition, insecurity, and worth [8]. When project logic becomes dominant, subjects are encouraged to treat themselves as temporary managers of outputs, always in search of the next deliverable, the next funding stream, the next visible product.

Within education, this logic has at least four consequences. First, temporality becomes compressed around deadlines and displayable results. Second, objects become valued in proportion to their exchange value, reputational value, or market-like visibility. Third, community relations are recoded into stakeholder management, audience capture, or client response. Fourth, learning is treated as justified to the extent that it produces portable competencies for competition in capitalist labor markets. Even when the word capitalism is not used, the underlying grammar is recognizable.

This critique does not require claiming that every classroom project is an instrument of capital. The more careful claim is that project-based education is unusually compatible with capitalist and neoliberal ideologies because its organizing form mirrors the broader social projectification of work, value, and subjectivity. That compatibility is precisely why an alternative organizing principle is needed.

ACTIVITY THEORY, MODE OF LIFE, AND THE RECONSTRUCTION OF INTENTION

Activity theory provides the conceptual resources for such an alternative. The recent article on activity theory as a pedagogical foundation emphasizes six interrelated principles: activity and consciousness, object orientation, the hierarchy of activity, actions and operations, mediation, internalization and externalization, and development [9]. These principles already indicate why the project is a weak master-category. Activity theory places the object of activity at the center, not the bounded task. It also insists that development is historical and systemic, not reducible to isolated performances.

The article on mode of life extends this framework in a direction especially relevant to veterinary and health sciences. It defines mode of life as the integrated configuration of material exchanges with environments, socio-technical mediation, communities, and divisions of labor through which beings persist and become [10]. This matters because education cannot be adequately oriented unless it knows what kinds of life it is trying to support. In veterinary and health sciences, the relevant modes of life are not only human. They are interspecies,

ecological, and institutional. Education is therefore not merely about doing projects. It is about participating in the design, maintenance, and transformation of modes of life.

The article on needs and wants supplies the mediating category needed to connect modes of life to educational planning. It treats needs and wants not as fixed traits but as relational dynamics arising historically and socially through activity, mediation, and changing life conditions [11]. Within this framework, a need becomes concrete when it meets an object capable of satisfying it. This is continuous with Leontiev's formulation that the object of activity is its true motive and with later clarifications that object orientation links need, motive, and transformative action [12-13].

On this basis, intention can be reconstructed as the planning of activities aimed at producing objects that serve to satisfy the needs arising from desired modes of life. This definition is deliberately thicker than everyday uses of intention. It does not refer simply to an individual's internal resolve. It refers to a structured, answerable, and socially mediated orientation of activity. Intention begins when a desired mode of life is specified, when the needs implied by that mode are analyzed, and when a plan is formed for producing or transforming the objects that can satisfy those needs. It is therefore more fundamental than a project. A project is one possible bounded arrangement of actions inside an intention. Intention, by contrast, orients the whole activity.

This reconstructed concept of intention is consistent with Leontiev's hierarchy. Activity is oriented by motive, actions by goals, and operations by conditions [12]. Project-based education often begins at the level of bounded action and treats the activity level as assumed or self-evident. Intention-centered education begins at the activity level. It asks what mode of life is being sought, what needs are at stake, and what object must be produced or transformed. Only then does it determine which actions and operations are needed.

THE INTERROGATIVE STRUCTURE OF INTENTION

If intention is to function as an educational and organizational principle, it must be made operational. The second and third attached texts suggest that this can be done through a structured set of interrogatives. These questions are not bureaucratic prompts. They are the practical grammar through which intention is specified and revised.

These questions mark a major difference from the project form. In project-based education, such questions are often treated as project-management variables. In an intention-centered model, they are subordinate to the prior question of mode of life and need satisfaction. This changes their meaning. "For whom?" no longer means target audience in a market-like sense. It means whose life conditions are at stake. "How much?" no longer means only budget or deliverable count. It also means what level of transformation is needed for the object to become adequate to the need.

This interrogative structure also resonates with Galperin's emphasis, as reconstructed by Arievitch and Haenen, on the orienting basis of action and on the spiral formation of mental actions [14]. Proper educational orientation does not merely assign a task. It equips the learner with a complete basis for understanding what the action is for, how it is structured, and under what conditions it can be appropriately carried out. Intention-centered education is therefore not anti-planning. It is more demanding planning.

WHY INTENTION OVERCOMES THE PROJECT FORM

The superiority of intention over the project form rests on four linked arguments.

First, intention is grounded in modes of life and needs, whereas the project form is grounded in bounded tasks and visible outputs. Because of this, intention preserves the relation between educational work and the conditions of life it is meant to improve. In veterinary and health sciences, this is indispensable. Educational objects involve animal welfare, disease prevention, client relations, food systems, and ecological interdependence. A bounded project can address one fragment of this field. Intention can organize the field as a whole.

Second, intention has a stronger theory of object orientation. Project-based education often treats the object as something to be completed. Activity theory, by contrast, treats the object as the motive-bearing problem space that organizes and transforms collective activity [13, 15]. When intention is used as the organizing principle, the

educational model stays closer to this activity-theoretical account. The object is not simply a product. It is a historically situated answer to a need emerging from a desired mode of life.

Third, intention provides a more adequate conception of agency. Stetsenko argues for a radical-transformative agency that overcomes ideologies of passive adaptation to the status quo and links education to the invention of the future in the present [16]. She explicitly rejects views of education that confine learners to adaptation and instead frames teaching-learning as participation in activist, future-oriented transformation [16-17]. This is highly compatible with an intention-centered model. Intention is not about managing a prefabricated task. It is about taking a stand on the kind of world and forms of life that should be created, and organizing activity accordingly.

Fourth, intention can incorporate projects without being reduced to them. This is important because the argument is not that all project work should disappear. Projects can remain useful at the level of action. They can delimit phases, coordinate teams, or scaffold output production. What is rejected is the elevation of the project into the master principle of the educational model. When that happens, the educational process is captured by the ideological and temporal logic of the project form. Intention subordinates projects to a wider and more answerable activity.

APPLICATION TO VETERINARY AND HEALTH SCIENCES EDUCATION AND RESEARCH

These distinctions become concrete when applied to veterinary and health sciences.

Consider a curriculum unit on antimicrobial stewardship in food-animal production. A project-based model might ask students to produce a farm intervention plan, a poster, or a presentation by the end of the semester. An intention-centered model begins elsewhere. It identifies the desired mode of life as one in which animal health, producer viability, microbial responsibility, and public health are maintained without routine dependence on inappropriate antimicrobial use. It then analyzes the needs that arise from that mode of life: the need for disease prevention, feasible management changes, reliable diagnostics, communication with producers, and surveillance of outcomes. Only on that basis are actions designed. Some of those actions may take the form of projects, but they are guided by a prior intention oriented to life conditions rather than deliverables.

The same is true in companion-animal medicine. A project-based course might require students to develop a client education campaign on obesity. An intention-centered course would start by defining the desired mode of life for animals and households in which species-typical movement, nutrition, affection, and routine are compatible with human domestic life. The relevant needs then become clearer: owner understanding, household feasibility, animal welfare, long-term adherence, and appropriate clinical monitoring. Educational planning is consequently more complete, because it addresses not only communication and product design but the transformation of a shared mode of life.

In public and community health, the difference is sharper still. A project-based program might ask students to complete a zoonosis awareness intervention in a specific community. An intention-centered program would begin with the desired mode of life in which human, animal, and environmental health are mutually sustained. It would then ask what objects, relations, and institutions must be produced or transformed to satisfy the needs that arise there. This could include surveillance routines, trusted communication channels, vaccine access, waste management, and community participation in decision-making. Again, projects may appear, but as subordinate components of a larger intentional architecture.

Research formation also changes under this model. In a project-centered research culture, the student's task is often to complete a bounded project, produce a thesis, and generate outputs legible to funders and evaluators. In an intention-centered model, the research question must be situated within a desired mode of life and within the needs that make the inquiry socially and scientifically necessary. Research design therefore becomes more than technical execution. It becomes answerable planning. The same interrogatives apply: what object is being sought, for whom, with whom, by what means, under what conditions, and at what scale? This is particularly important in veterinary and health sciences, where research subjects and consequences are inseparable from ethical, ecological, and institutional concerns.

DISCUSSION

A reasonable objection is that project-based education already contains many of the elements defended here. It can be collaborative, meaningful, student-centered, and socially engaged. This objection is valid as far as it goes. The problem is not that all project-based education is pedagogically defective. The problem is that the project form does not itself guarantee a robust account of object, need, mode of life, or transformative agency. It can host progressive practices, but it can also host capitalist realism with remarkable ease.

Another objection is that intention may sound too abstract or too idealistic for everyday institutional design. This concern can be answered in two ways. First, the interrogative structure of intention makes it operational. Second, intention is less abstract than the project form once one is dealing with real welfare and health problems. In such settings, actors inevitably ask for whom the work matters, what life conditions are implicated, and what resources, collaborators, and mediators are needed. Intention merely makes explicit what the project form often obscures.

A further objection is that the critique of capitalism risks over politicizing pedagogy. Yet project-based education is already political when it naturalizes competition, market realism, entrepreneurialism, and the commodification of learning artifacts. The issue is not whether pedagogy is political. The issue is whether its politics remain hidden. Stetsenko's work is useful precisely because it refuses the ideology of passive adaptation and insists that education is always implicated in creating futures, not merely in preparing individuals for them [16].

CONCLUSION

Project-based education has real pedagogical strengths. It can connect knowledge with doing, foster collaboration, and improve engagement and achievement. Yet as an educational model it remains conceptually and ideologically limited. Historically tied to vocational and industrial traditions and increasingly compatible with neoliberal-capitalist projectification, it too easily reduces education to bounded deliverables, visible outputs, and market-like realism.

An intention-centered model grounded in activity theory offers a more adequate alternative. By defining intention as the planning of activities aimed at producing objects that satisfy the needs arising from desired modes of life, the educational process is reoriented toward object integrity, collective agency, and ethical accountability. This model is especially suited to veterinary and health sciences because those fields constantly intervene in modes of life and in the needs of human and nonhuman beings. In such contexts, the decisive question is not whether students can complete projects. It is whether they can deliberately and collaboratively organize activity in the service of more just, sustainable, and health-promoting forms of life.

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