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Grant writing as an activity-based instrument for developing leadership skills

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Abstract: *This article substantiates the use of grant writing as an activity-based instrument for developing leadership skills among master's and doctoral learners in Education. The starting point is that university practice often reduces grant writing to application drafting techniques, whereas real funding competitions primarily depend on managerial decisions and the team's publicly articulated commitments across the full project cycle. The study aims to conceptualize grant writing as a sequence of actions from problem identification to results communication and reporting, and to specify which leadership skills are activated at each stage. The methodology combines a conceptual analysis of relevant research and policy frameworks related to team science, project management, science communication, and research data management with theoretical modelling in the form of a stage-to-skill mapping matrix that links grant cycle phases to observable leadership actions. The results show that leadership in grant writing is situational and role-dependent and can be operationalized through concrete actions: analytical problem framing and goal setting; team formation and role alignment; stakeholder negotiation and transparent documentation of*



agreements; budgeting as prioritization of resources; risk planning and evidence-oriented evaluation; ethical decision-making in data practices; and communication of results as a form of public accountability. The discussion highlights the pedagogical value of the cyclical approach because it shifts learning and assessment from “text quality” toward the quality of decisions, feasibility, and ethical integrity. The practical implication is that higher education programs can design grant-writing modules where leadership development is assessed through stage-specific outputs and decisions rather than solely through the final application narrative.

Keywords: *grant writing; leadership skills; activity-based approach; teamwork; project management; budgeting; risk management; results communication; data ethics; graduate education.*

Грантрайтинг як діяльнісний інструмент розвитку лідерських умінь

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Анотація: *У статті грантрайтинг обґрунтовано як діяльнісний інструмент розвитку лідерських умінь у здобувачів освіти магістерського та докторського рівнів у галузі Освіта. Вихідним положенням є те, що університетська практика часто редукує грантрайтинг до техніки написання заявки, тоді як у реальних конкурсах вирішальними стають управлінські рішення й публічні зобов'язання команди протягом повного циклу проєкту. Метою дослідження є теоретично описати грантрайтинг як послідовний цикл дій від ідентифікації проблеми до комунікації результатів і звітування та показати, які лідерські*



уміння активуються на кожному етапі. Методологія ґрунтується на концептуальному аналізі актуальних праць і нормативно-політичних рамок, пов'язаних із командною наукою, проєктним менеджментом, комунікацією результатів і управлінням дослідницькими даними, а також на теоретичному моделюванні матриці відповідності між етапами грантового циклу та лідерськими діями. Результати демонструють, що лідерські уміння в грантрайтингу мають ситуативно-рольову природу і проявляються як спостережувані дії: аналітичне формулювання проблеми й цілей; організація команди та узгодження ролей; переговори зі стейкхолдерами і прозора фіксація домовленостей; бюджетування як пріоритизація ресурсів; планування ризиків і доказове оцінювання; етична робота з даними; комунікація результатів як практика публічної відповідальності. Обговорення підкреслює педагогічний потенціал циклічного підходу, оскільки він переводить оцінювання з рівня «якість тексту» на рівень якості рішень, здійсненності та етичної коректності. Практичний висновок полягає в можливості проєктувати навчальні модулі, де лідерські уміння підлягають аргументованому оцінюванню через продукти і рішення кожного етапу грантового циклу.

Ключові слова: грантрайтинг; лідерські уміння; діяльнісний підхід; командна робота; проєктний менеджмент; бюджетування; управління ризиками; комунікація результатів; етика даних; підготовка магістрів і аспірантів.

Problem Statement. In higher education, grant writing is often reduced to the technique of preparing a competitive application: how to package an idea, complete the form, select indicators, justify the budget, and submit the documents correctly. This reduction simplifies instructional goals but poorly reflects the actual logic of project-based funding. In grant programs, a proposal is not merely a text. It records a sequence of managerial decisions and the team's public commitments, beginning long before the application is drafted and continuing through implementation and reporting. If early



decisions are flawed, strong editing will not compensate for weak feasibility, misaligned partnerships, or unethical procedures for working with people and data.

In this article, grant writing is treated as an activity-based cycle: identifying a problem and translating it into a project goal; forming a team and aligning roles; negotiating with stakeholders and formalizing agreements; budgeting as a prioritization tool; planning risks and response procedures; designing monitoring and evaluation; communicating results and reporting. Each step requires not only subject-matter knowledge but also leadership skills that manifest in concrete actions: initiating decisions, facilitating alignment, taking responsibility for the limits of promises, ensuring transparency in resource allocation, being prepared to work under uncertainty, and maintaining ethical integrity in interactions with participants and data.

The problem is that, in university preparation, learners' leadership skills are often declared as an expected outcome but are less often supported through a coherent sequence of learning situations in which these skills must be demonstrated in action and assessed with clear justification. Grant writing as a cycle can potentially close this gap by bringing learners into a system of interdependent decisions in which one can see not only the quality of the wording but also the quality of the managerial design, team interaction, and accountability.

Review of Relevant Research. Recent scholarship increasingly treats grant writing as a complex professional competence that develops not through one-time “training in how to write,” but through the integration of idea development, team coordination, and process management during proposal preparation. Work focused on early-career researchers emphasizes that typical university seminars often remain too general and do not provide sufficient practice for developing an original project idea and translating it into a coherent proposal logic. More effective designs rely on active learning, co-creation, and constructive alignment, which support the claim that grant writing requires more than textual skills and involves decision-making across an entire cycle [13].



Empirical studies from recent years add an important nuance: proposal outcomes improve when training interventions systematically include mentoring or coaching and repeated feedback loops. A pragmatic group-randomized trial that tested variations of a coaching intervention for NIH proposal development demonstrated that the meaningful indicators of impact are not “knowledge of proposal structure,” but submission and funding-related outcomes that reflect the participant’s capacity to move from an initial concept to a competitive proposal [25]. Building on the same line of inquiry, a baseline analysis of participants in a randomized trial of grant-writing coaching groups shows that such coaching can be understood as a mechanism that structures access to mentorship, particularly for early-career scholars and groups facing structural barriers in research careers [26].

Alongside coaching models, there is growing attention to shorter, intensive programs and workshops. A practice-oriented roadmap for delivering grant-writing workshops in clinical and translational settings links program impact to clear instructional architecture, explicit deliverables, and a blended design that combines synchronous sessions with asynchronous work, supported by a structured system that helps participants close the gap between intention and actual submission [6]. In a related vein, research on a multi-session grant-writing course in academic medicine indicates that iterative feedback and mock-review elements should be evaluated not only through self-reported confidence but also through indicators of grant activity that better align with the real aims of grant-writing preparation [15].

A notable trend in 2024–2025 is the shift from the “mechanics of writing” toward the motivational and psychological conditions that shape whether scholars can sustain grant-writing efforts amid stress, rejection, and competition. A workshop model grounded in social-emotional learning proposes treating emotional barriers and author mindsets as factors that influence the continuity of writing practices. This perspective explicitly moves the focus from formal rules to scientific identity, a sense of purpose, and community as conditions that support completion of the grant-writing cycle [16].



Another strand of recent work analyzes grant writing as a genre and links success not only to structural correctness but to how the author constructs and communicates value. A corpus-based genre study of grant proposal summaries identifies differences between successful and unsuccessful texts at the level of rhetorical moves, particularly in how clearly scientific and societal value is signaled. These findings support the view that “text quality” often results from managerial and analytical design rather than a purely linguistic achievement [3].

A further contribution comes from studies that position grant writing within research capacity building and highlight the role of institutional conditions. A study using qualitative comparative analysis suggests that trajectories toward proposal submission are shaped by configurations of individual and organizational factors. In this sense, “training grant writers” implies working not only on the individual ability to draft text, but also on access to support structures, mentoring, and environmental resources, which makes leadership in teams more concrete and accessible [24]. Similarly, a qualitative document analysis of a public involvement funding scheme indicates that proposal quality depends on genuine stakeholder engagement before submission. This directly supports the interpretation of grant writing as a cycle of negotiation and alignment rather than a final textual product [9].

From an instructional design perspective, research evaluating academic coaching as an intervention in higher education is also relevant. A systematic review of academic coaching identifies characteristics of effective interventions and emphasizes the importance of structure, regular interaction, and a focus on tangible outcomes. While coaching is not identical to grant writing, these findings help explain why grant-writing instruction benefits from repeated feedback cycles and sustained support when the goal is behavioral change and stable practice, not one-time familiarity with templates [2].

Recent work points to the growing influence of digital tools on grant-writing practices. Although much discussion focuses on generative AI, empirical evidence



from the Ukrainian higher education setting shows that learners perceive tools such as ChatGPT as potentially helpful for academic writing while remaining sensitive to risks related to academic integrity, accountability, and verifiability. For the present topic, the relevance is not “faster drafting,” but the emergence of a new factor that shapes how the writing cycle is organized, including leadership decisions about appropriate use, transparency, quality control, and ethical boundaries [8].

Overall, research published in the last five years demonstrates a clear shift from advice on proposal structure to an understanding of grant writing as a multi-component activity that involves coaching and mentorship, team organization, stakeholder engagement, management of motivational barriers, and genre competence. At the same time, a methodological gap remains: the literature still lacks an integrated model that explicitly links stages of the grant cycle to leadership skills as observable actions suitable for instructional design and assessment. Addressing this gap is the focus of the article's subsequent sections.

Purpose and Methods. The purpose of this study is to provide a theoretical rationale for grant writing as an activity-based instrument for developing leadership skills among master’s and doctoral learners in Education, treating it as a sequential cycle of managerial actions from problem identification to results communication and reporting. To achieve this purpose, a conceptual analysis was conducted of scholarship on grant-writing instruction, collaborative writing in proposal development, the science of team science, project management, results communication, and research data management policies. Based on this analysis, theoretical modeling was used to construct a mapping matrix that links stages of the grant cycle to leadership skills. The stages were described in terms of typical decisions and interactions, while leadership skills were operationalized as actions observable in learning tasks and assessable.

Results. The modeling defines grant writing as a cycle in which a team consistently develops decisions that ensure project feasibility, alignment with competition requirements, and the ethical soundness of procedures. A central result is



the substantiation that leadership skills in grant writing are situational and role-dependent, manifesting through different types of actions at different stages.

At the problem-identification stage, leadership skills are associated with analytical thinking and responsibility for the project's boundaries. They are expressed in the ability to distinguish causes from symptoms, set realistic goals, and formulate intended changes in ways that can be verified. Leadership action here involves initiating a shared vision and rejecting attractive but unsupported formulations that increase the risk of non-implementation.

At the team-formation stage, leadership skills take on a collective dimension. They are expressed in the ability to identify necessary roles, align responsibility areas and time commitments, and establish interaction rules that reduce the likelihood of conflicts and accountability gaps. In line with the logic of team science, the organization of collaboration and its sustainability are conditions for effectiveness [12; 17].

The stakeholder-negotiation stage activates communication and negotiation skills as components of leadership. Critical here is the ability to translate parties' interests into aligned expectations and to formalize agreements transparently. In instructional terms, what is assessed is not "persuasiveness" per se, but the appropriateness of commitments, the absence of manipulation, and the coherence of partners' roles.

In the model, budgeting is treated as a managerial instrument that makes the project's priorities and boundaries explicit. Leadership skills are expressed in the ability to explain the budget as a system of decisions, align expenditures with results, choose among alternatives, and ensure transparency and fairness in resource allocation. This understanding aligns with the project management perspective, where budgeting is part of feasibility planning [18].

Risk planning and the design of monitoring and evaluation establish a dimension of working with uncertainty and evidence. Leadership skills are expressed in the ability



to frame risks as event scenarios, assess consequences, plan preventive actions, and define performance indicators that are ethically acceptable and methodologically sound. A key point here is integrating project thinking with research data management requirements, which contemporary policies treat as a systematic practice rather than a late-stage formality [11; 10].

In the model, results communication and reporting are interpreted as a stage of public accountability. Leadership skills are expressed in the ability to prepare messages for different audiences, sustain trust through transparency, and explain limitations without substituting substance with “marketing” language. This aligns with evidence on the effectiveness of public communication training for learners [4; 19] and with approaches to building a communication portfolio that treat leadership as a core competency [5; 14; 21].

Overall, the model shows that grant writing as a cycle can be translated into a sequence of learning situations in which leadership skills become observable. This reduces the gap between declared educational outcomes and learners’ actual ability to act in project settings. In addition, scholarship on collaborative grant-writing practices supports the claim that group-based organization is a mechanism for developing accountability and coherence, not merely a way to speed up drafting [21]. Evidence on the effects of intensive grant-writing formats also highlights the role of structured support and feedback [22], which is important for implementing the cycle pedagogically.

Discussion. The results strengthen the position that grant writing should be used to develop leadership skills when instruction is organized around a decision-making cycle rather than solely around the structure of an application. This shifts the quality criterion for training: “well written” becomes an insufficient indicator, because funders also assess feasibility, coherence, risk, and the team’s accountability. In effect, a grant proposal is an aggregated reflection of a team’s capacity, as described by scholars in the science of team science [1; 23].



A practical implication is a shift in emphasis from individual authorship to collective responsibility. The collaborative grant-writing groups described by Dopke and Crawley [7] show that stable mechanisms for alignment and facilitation reduce the risk of inconsistent decisions and improve proposal quality. In master's and doctoral training, this implies a need to design roles and procedures that require participants to negotiate expectations, authorship, and boundaries of contribution rather than merely “submitting a shared file.”

In the proposed model, the budgeting stage becomes pedagogically productive because it requires learners to articulate priorities and make trade-offs. This stage aligns well with project management logic [18] and simultaneously creates a natural setting for developing leadership actions related to transparency and fair resource allocation. Results communication, by contrast, positions leadership at the level of public accountability and calls for instructional formats that develop audience work, reflection, and accurate explanation of limitations. This is supported both by empirical evidence on public communication programs [4] and by practical frameworks for planning learners' communication strategies [5; 14].

The ethical dimension, reinforced by data management policies, is particularly important for education-focused grants. When the logic of research data management (RDM) sets expectations for data planning, access, preservation, and good stewardship practices [11; 10], leadership skills are expressed in the ability to combine evidence for results with respect for participants' rights and safety procedures. This changes the standard of “success,” because some strong but unethical or unsafe decisions must be rejected at the design stage.

The issue of gender-sensitive and supportive training formats is also significant. A Nature piece on grant workshops for women, although published as a brief report, reflects a broader trend: grant support and training programs are treated as instruments for reducing barriers and strengthening the capacity of research groups [20]. For university teaching, this suggests that access to grant-writing practices understood as a



cycle may be an important element of equitable preparation and leadership development.

This study is theoretical and methodological; therefore, its results describe a generalized model of the grant-writing cycle and typical leadership skills rather than measured changes within a specific learning group. Funding programs differ substantially in requirements for partnerships, budgeting, indicators, data policies, and assessment procedures, so the model must be adapted to the specific type of competition. In addition, the sources primarily represent an English-language corpus and selected institutional policies, which may limit transferability to national practices across all countries without accounting for local norms and procedures. A next step should include piloting an instructional design based on this model, documenting observable leadership actions and their change over time, and developing assessment tools that distinguish between “well formatted” and “managerially feasible and ethically sound.”

Conclusions. Grant writing is substantiated as an activity-based instrument for developing leadership skills among master’s and doctoral learners when it is organized as a cycle of managerial actions. Within this approach, leadership is expressed through observable actions that vary by stage: from responsible problem framing and team formation to negotiation, budget decisions, risk management, evidence-based evaluation, and ethical communication of results. This logic aligns with approaches from the science of team science, project management, and contemporary requirements for research data management, while also providing a basis for instructional design that assesses not only the text but also the quality of decisions and accountability. Treating grant writing as a cycle creates an opportunity to make leadership development more structured, transparent, and measurable in university preparation.



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