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Psychological Foundations of Developing Management Functions in Young People in Higher Education

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Abstract

This article examines the psychological foundations of developing management functions in higher education students. It distinguishes management functions, understood as goal setting, planning, organizing, coordination, and monitoring, from the cognitive executive functions that support purposeful behaviour. A conceptual analysis of selected research on executive functions, self-regulated learning, motivation, leadership development, and feedback informs an instructional framework. The analysis identifies four interconnected domains: cognitive regulation, motivational engagement, interpersonal coordination, and reflective monitoring. A four-stage framework comprising diagnostic assessment, targeted preparation, practical management, and reflective evaluation is proposed. Observable behavioural indicators are specified for each management function. The framework connects individual self-management with participation in shared tasks and supports assessment through plans, work records, observation, and reflection. This theoretical article reports no original participant data. Its contribution is a structured proposal for teaching and assessing management functions; its effectiveness and measurement properties require empirical investigation in higher education.

Keywords

management functions; higher education; university students; executive functions; self-regulated learning; motivation; teamwork; reflection.

Introduction

Higher education requires students to manage tasks that extend beyond acquiring subject knowledge. Independent assignments, collaborative projects, presentations, and teaching practice involve setting priorities, allocating time,

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coordinating contributions, and evaluating outcomes. A student may understand a topic yet struggle to translate that understanding into an achievable plan. Similarly, a group may possess adequate subject knowledge while failing to clarify responsibilities or respond to delays. These difficulties make the development of management functions relevant to academic work and professional preparation.

In this article, management functions refer to goal setting, planning, organizing, coordination, and monitoring. These functions describe what a person does when directing individual or collective activity. Executive functions describe cognitive processes supporting goal-directed behaviour, including inhibition, working memory, and cognitive flexibility [1, 2]. The concepts are related but should not be treated as interchangeable. Cognitive control can support a management decision, whereas effective management also depends on communication, responsibility, task knowledge, and the conditions under which the decision is implemented.

A further distinction concerns individual and collective activity. Self-management involves regulating personal effort, attention, and time. Collective management involves negotiating a shared goal, distributing responsibilities, exchanging information, and maintaining accountability. A student who organizes personal study effectively may still require instruction in coordinating the work of others. Consequently, management education should address both levels and examine how students move between them during authentic academic tasks.

The objective is to identify psychological mechanisms relevant to management functions and develop an instructional framework for higher education. The guiding question is how cognitive regulation, motivation, interpersonal interaction, and reflection can be translated into teachable management actions. The article also proposes observable indicators for assessing these actions. The intended contribution is conceptual and practical: it organizes established theoretical perspectives into a framework that can subsequently be tested, rather than claiming that a particular intervention has already produced measurable gains.

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Methods

The article uses a narrative conceptual analysis of six selected publications addressing executive functions, self-regulated learning, self-determination, leadership development, and educational feedback [1–6]. These publications were selected for their relevance to the mechanisms underlying purposeful individual and collaborative activity. The analysis is not a systematic review or meta-analysis and does not claim exhaustive coverage of the literature. The source set provides theoretical anchors for constructing an instructional proposal.

The unit of analysis was the relationship between a management function and a psychological mechanism. Each function was considered in terms of its purpose, the actions through which it becomes observable, and the conditions that may facilitate or obstruct its performance. Concepts from different research traditions were compared without assuming that they measure the same construct. In particular, cognitive executive functions were treated as supporting processes rather than direct measures of managerial competence.

The synthesis proceeded by defining the management functions, relating relevant theoretical concepts to those functions, and translating the relationships into proposed learning activities and assessment indicators. The resulting categories are an interpretive organization of the literature. They are not factors established through statistical analysis. No students were recruited, no questionnaires were administered, and no intervention or original statistical analysis was conducted. Accordingly, the Results section presents conceptual findings and a proposed framework, not empirical effects.

Results

Psychological domains supporting management functions

The conceptual synthesis identified four domains relevant to the proposed framework: cognitive regulation, motivational engagement, interpersonal coordination, and reflective monitoring. These domains overlap in practice. Planning requires maintaining the goal and considering task constraints, but also accepting

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responsibility for the plan. Coordination requires clear communication, but also the ability to revise an initial approach. The domains therefore provide an analytical structure rather than independent categories of student performance.

Cognitive regulation supports the maintenance of task goals, the selection of relevant information, and adjustment when circumstances change. Research on executive functions provides a basis for distinguishing related components of cognitive control [1, 2]. For management instruction, this distinction suggests assessing different actions separately. Producing an organized plan, resisting an irrelevant distraction, and revising a decision are not equivalent demonstrations of competence. A single general rating may conceal important differences between them.

Motivational engagement concerns whether students understand the purpose of a task and accept ownership of their contribution. Self-determination theory directs attention to autonomy, competence, and relatedness [4]. In the proposed framework, students receive a defined outcome and quality criteria while retaining a meaningful choice of methods. This arrangement is intended to connect initiative with responsibility. The recommendation is a pedagogical interpretation of the theory, not an independently verified effect of the framework.

Interpersonal coordination concerns the translation of personal intentions into shared action. The distinction between developing individual leaders and developing collective leadership capacity is relevant here [5]. In student groups, management should therefore include listening, explaining responsibilities, recording agreements, and enabling contributions from less vocal members. Reflective monitoring connects these activities to evidence: students compare intended and completed work, identify the consequences of decisions, and specify changes for the next task.

Management functions as observable actions

Goal setting becomes observable when students specify the intended product and criteria for success. A goal such as preparing a seminar remains incomplete unless the group identifies the required programme, presentations, materials, and

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participant arrangements. Planning becomes observable when students sequence activities, estimate time, identify dependencies, and explain priorities. These actions allow an instructor to examine the reasoning behind a plan rather than its visual presentation alone.

Organizing becomes observable through the allocation of responsibilities and resources. Each task should have an identified contributor, deadline, and method of verification. Coordination becomes observable through timely information exchange, clarification of disagreements, and renegotiation when work cannot proceed as planned. Monitoring becomes observable when students check progress against agreed criteria and introduce a justified correction. Reporting a problem early is consequently treated as accountable behaviour rather than automatically interpreted as failure.

External supports, such as schedules, task lists, and decision records, make the management process visible. Their educational value depends on how students use them. Completing a template does not demonstrate that a student can justify priorities or respond to an unexpected constraint. Students should therefore explain why their plan is suitable, which assumptions it depends on, and what would trigger its revision. The assessment focus remains the decision process and its consequences.

A four-stage instructional framework

The proposed framework comprises diagnostic assessment, targeted preparation, practical management, and reflective evaluation. The stages form a recurring instructional cycle rather than a one-time sequence. Self-regulated learning provides a theoretical basis for connecting preparation, performance, and reflection [3]. The framework extends this cycle to both personal task management and participation in shared activity. Its stages are proposed design elements and should not be described as a validated programme.

Diagnostic assessment uses a short management task to identify existing strategies. For example, students may prepare a plan for a seminar under specified time and resource constraints. The instructor examines the clarity of the goal,

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sequencing of activities, distribution of responsibilities, and proposed progress checks. A brief self-assessment is compared with the work sample. The purpose is to identify instructional needs, not to assign students permanent labels or infer psychological traits from one performance.

Targeted preparation focuses on the actions that were insufficiently demonstrated. Students practise converting broad intentions into assessable outputs, estimating task duration, identifying dependencies, and comparing alternative plans. Rather than supplying a complete solution, the instructor asks students to explain the strengths and limitations of two possible approaches. This makes the justification of a decision part of the task and allows discussion of feasibility before implementation.

Practical management takes place through a small collaborative project. Responsibilities such as coordination, information gathering, resource organization, and quality checking rotate across tasks so that all students experience different functions. A planned change in one condition can require the group to revise its approach. For example, a presentation format may change or an additional deliverable may be introduced. Such changes should serve a clear instructional purpose and remain proportionate to the students' workload.

Reflective evaluation compares the initial plan with the completed work. Each student identifies a management decision, explains its outcome, and proposes a specific adjustment. Feedback addresses observable actions rather than personal labels. A comment explaining that unspecified deadlines caused tasks to accumulate is more actionable than a general judgment about the student. Research on feedback supports attention to the task, the process, and self-regulation [6]. The proposed framework uses this distinction to structure the feedback discussion.

Proposed assessment indicators

Five assessment dimensions correspond to the management functions. Goal setting concerns the specificity of outcomes and success criteria. Planning concerns justified priorities, sequencing, and timing. Organizing concerns clear responsibilities and appropriate resource allocation. Coordination concerns the exchange of relevant

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information and maintenance of agreements. Monitoring concerns evidence-based progress checks and corrective action. These dimensions are proposed instructional indicators, not standardized psychological scales.

Within each dimension, performance can be described by the support required: substantial guidance, occasional prompts, or independent action accompanied by an explanation. These descriptors should be applied to the task actually observed. A student may perform independently in one situation and require assistance in another. Evidence should include the plan, work records, instructor observation, peer accounts, and a short reflective explanation. No single source should be assumed to provide a complete account of management competence.

Discussion

The framework links management education to ordinary academic activity. Its central implication is that students need opportunities to make decisions and examine their consequences, rather than only receive descriptions of effective leadership. Classroom projects can make management functions visible when goals, responsibilities, and evaluation criteria are explicit. Without these conditions, a successful final product may reveal little about who planned the work, how disagreements were resolved, or whether the workload was distributed fairly.

Individual and collective development require related but distinct forms of practice. Personal schedules may support self-management, while collaborative tasks expose students to negotiation and interdependence. Rotating responsibilities can prevent coordination experience from being restricted to students who already volunteer for leadership roles. However, rotation should be accompanied by preparation and feedback. Simply appointing a student as group leader does not establish that meaningful learning has occurred.

Emotional demands should also be considered. Time pressure and disagreement may influence the quality of communication and decisions. Instruction can ask students to clarify an objection, restate the problem, and consider alternatives before responding. The purpose is not to suppress emotion, but to maintain purposeful

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interaction. Assessment should therefore focus on observable handling of the situation rather than assumptions about a student's personality or emotional stability.

The framework has several limitations. Its categories are based on a selective conceptual synthesis, and their relationships have not been tested in a local student population. The proposed performance descriptors lack established reliability and validity. Context also matters: unclear instructions, limited resources, language difficulties, or unequal group participation may account for weak performance. Instructors should investigate these conditions before attributing a difficulty to the student's psychological characteristics.

Future research should operationalize the indicators, examine agreement between assessors, and evaluate change across comparable tasks. An intervention study could include baseline and follow-up measurements, an appropriate comparison condition, and a later assessment of transfer. Analyses should account for initial differences and the nested structure of students working in groups. Any reported improvement should be accompanied by effect estimates and uncertainty, with causal claims limited by the design.

Conclusion

Management functions in higher education can be conceptualized as observable actions supported by cognitive regulation, motivation, interpersonal coordination, and reflection. The proposed framework connects diagnostic assessment, targeted preparation, practical management, and reflective evaluation. It emphasizes justified decisions, shared responsibility, and evidence-based correction. Its contribution is a coherent basis for instructional design and assessment. Empirical research is required to determine whether implementation improves students' management performance and whether the proposed indicators measure development consistently.

References

1. Zelazo, P. D. (2020). Executive function and psychopathology: A neurodevelopmental perspective. Annual Review of Clinical Psychology, 16, 431–454. https://doi.org/10.1146/annurev-clinpsy-072319-024242

https://creativecommons.org/licenses/by/4.0/

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2. del-Valle, M. V., Canet-Juric, L., Zamora, E. V., Andrés, M. L., & Urquijo, S. (2024). Executive functions and their relation to academic performance in university students. Psicología Educativa, 30(1), 47–55. https://doi.org/10.5093/psed2024a2

3. Theobald, M. (2021). Self-regulated learning training programs enhance university students' academic performance, self-regulated learning strategies, and motivation: A meta-analysis. Contemporary Educational Psychology, 66, 101976. https://doi.org/10.1016/j.cedpsych.2021.101976

4. Howard, J. L., Bureau, J., Guay, F., Chong, J. X. Y., & Ryan, R. M. (2021). Student motivation and associated outcomes: A meta-analysis from self-determination theory. Perspectives on Psychological Science, 16(6), 1300–1323. https://doi.org/10.1177/1745691620966789

5. Day, D., Bastardoz, N., Bisbey, T., Reyes, D., & Salas, E. (2021). Unlocking human potential through leadership training & development initiatives. Behavioral Science & Policy, 7(1). https://doi.org/10.1177/237946152100700105

6. Wisniewski, B., Zierer, K., & Hattie, J. (2020). The power of feedback revisited: A meta-analysis of educational feedback research. Frontiers in Psychology, 10, 3087. https://doi.org/10.3389/fpsyg.2019.03087

7. Hayitov, O. E. (2021). Boshqaruv psixologiyasi [Management psychology]. Istiqlol. (In Uzbek).

8. Ashurov, M. (2021). Boshqaruv psixologiyasi [Management psychology]. AL-FERGANUS LLC. (In Uzbek).

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