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IMPROVING THE DESIGN OF LEARNING AND INDEPENDENT-STUDY ASSIGNMENTS IN NEONATOLOGY WITHIN THE CREDIT-MODULAR SYSTEM

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Annotation

The credit-modular system places greater responsibility on students to manage their learning and develop professional competencies independently. In medical education, assignments should do more than test recall: they should guide students to interpret clinical information, connect theoretical knowledge with neonatal cases, use reliable medical sources, and explain their reasoning. This study outlines a structured approach to assignment design based on contextual relevance, logical sequencing, differentiation, and integration across clinical disciplines. The proposed approach combines knowledge-check questions, clinical case tasks, analytical activities, and practical-skill assignments. The dissertation reports that more than 800 students participated in the broader experimental work, while a representative comparison included 345 students. The study highlights the need for purposeful, clearly assessed assignments in credit-modular medical education.

Keywords: Neonatology; credit-modular system; medical education; independent study; learning assignments; clinical competence; task design.

Relevance

The quality of learning tasks is central to contemporary medical education because future clinicians must apply knowledge in changing clinical situations rather than simply reproduce textbook information. The present study identifies a need to



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improve the pedagogical and methodological basis of assignments used in neonatology. Within the credit-modular system, students are expected to prepare independently, work with educational resources, and demonstrate learning outcomes. Tasks focused only on memorisation may not adequately develop clinical reasoning, communication, or the ability to interpret patient information. Assignment design is therefore relevant to independent learning and professionally meaningful competencies.

Aim. To describe methodological principles for designing learning and independent-study assignments in neonatology that support students' theoretical understanding, clinical reasoning, and independent learning within the credit-modular system.

Materials and methods. The study is based on an analysis of the methodological principles, pedagogical and psychological requirements, and approaches to organising independent learning examined in this research. The dissertation describes pedagogical observation, comparative analysis, classification, interviews, questionnaires, statistical analysis, and pedagogical experimentation. It reports that more than 800 students took part in the experimental work and that a representative sample of 345 students was used for detailed comparison. The present thesis synthesises these reported methods and findings; no new participants or independent measurements were added.

Results. The study supports a multi-level structure for neonatology assignments. Reproductive tasks can check essential terminology and core facts. Applied tasks can require students to interpret clinical information, compare possible explanations, or use theoretical knowledge in a case scenario. Analytical and



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research-oriented tasks can ask students to justify a conclusion, search for evidence, prepare a clinical document, or present findings in a structured format. The source also emphasises integration between medical subjects, logical sequencing, contextual relevance, and digital information resources. Infographics and graphic organisers are identified as possible ways to clarify complex information. These principles make assignments more purposeful and align them with independent learning outcomes.

Discussion. Assignment quality depends not only on the number of tasks but also on their cognitive demand and connection to clinical practice. A balanced set should progress from recall to application and analysis, while making expectations and assessment criteria clear. For example, a neonatal case assignment may ask students to identify relevant findings, explain their significance, compare alternatives, and justify a conclusion using course materials. Such tasks connect knowledge, reasoning, communication, and independent information-seeking. Assignments should remain appropriate to students' training level and should not replace supervised clinical practice. The proposed approach is best understood as a methodological framework rather than evidence that one task format is universally superior.

Conclusion, purposefully designed neonatology assignments can strengthen the relationship between classroom learning and independent study in the credit-modular system. A sequence of knowledge, application, and analytical tasks-supported by clear criteria and integration with clinical subjects-offers a practical route to developing students' learning autonomy and professional reasoning.