STRATEGIES FOR DEVELOPING INDEPENDENT STUDY SKILLS THROUGH PERSONALIZED LEARNING AMONG STUDENTS IN HIGHER AGRICULTURAL EDUCATION

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Abstract. Personalized learning involves a tailored approach to the educational process aimed at maximizing the potential of each student as an individual learner. It emerges as an active strategy that emphasizes the creation of a positive and meaningful learning experience within a democratic, social, and non-directive environment. By employing strategies for cultivating individual study skills, students learn to build their own knowledge through actively, reflectively, and personally practiced abilities and competencies. This paper aims to underscore the importance of developing and enhancing individual study skills to achieve both professional and transferable competencies among students in higher agricultural education. In personalized learning, the ability to study independently is fundamental to developing a unique learning style, which is cultivated through the implementation of various techniques and methods. This paper aims to highlight the importance of cultivating and enhancing individual study skills to achieve professional and transferable competencies among students in higher agricultural education.

Keywords: learning strategies, learning styles, tailored learning, individual study skills

INTRODUCTION

J. Rubin was one of the trailblazers who introduced the concept of strategy in the field of learning. He defines learning strategies as the techniques employed by learners to effectively grasp knowledge (Witkin et al., 1962). These strategies are regarded as both actions and cognitive efforts made by learners to enhance their understanding of instructional material (Cohen, 2011). According to Witkin et al. (1962), learning strategies can be classified into three distinct categories:

1. **Metacognitive Strategies**: These strategies enable learners to effectively plan, organize, and regulate their educational activities, allowing them to assess their own progress along the way.

2. **Cognitive Strategies**: These techniques are designed to facilitate the learning process by employing methods such as note-taking, selecting reliable academic sources (including dictionaries and reference materials), utilizing repetition for enhanced retention, drawing parallels, and memorizing key terms and concepts.

3. **Social-Affective Strategies**: These approaches emphasize collaborative learning and the sharing of knowledge. They involve teamwork, tackling common challenges together, and seeking guidance from teachers.

Learning strategies consist of intricate activities utilized by students to tackle educational tasks and enhance their skills. Engaging in strategic learning fosters greater independence among students, enabling them to take active roles in their education and apply these strategies in their future careers (Malykhin & Galla, 2016). Additionally, adopting a personalized approach to learning increases student motivation and involvement, ultimately leading to improved academic outcomes. This tailored educational model aims to address the unique needs and prior experiences of individuals (Lee et al., 2018; Miliband, 2006),

empowering each learner to realize their full potential through customized learning experiences (Hsieh & Chen, 2016; Lin et al., 2013).

In contemporary settings, personalized learning has developed into an advanced system (Lu et al., 2014) that takes into account a wide range of individual differences (Scheiter et al., 2019; Wang & Liao, 2011). These differences include factors such as gender, motivation for learning, cognitive styles, and preferred learning methods. The objective is to create an optimal learning experience tailored to these diverse individual traits (Afini Normadhi et al., 2019), while also overcoming constraints related to time and geography.

To date, more than 70 distinct learning style models have been identified (Coffield et al., 2004). The term "learning style" refers to an individual's preferred method for acquiring, organizing, and processing information (Hernández-Torrano et al., 2017). This concept has gained significant traction over recent decades, based on the belief that understanding one's preferred learning style and approach can empower students to adapt and enhance their learning experiences (Chan et al., 2011; Samarakoon et al., 2013).

Personalized learning is defined as a student-centered approach that tailors to the diverse requirements and developmental needs of each learner (Lee et al., 2018). To "customize learning" means to modify the educational content offered for learning and comprehension in accordance with individual needs, interests, and each student's unique pace of learning. This approach adjusts teaching methods and educational resources to align with the personal traits and interests of students (Bishop, P. A. et al., 2019).

In today's context, personalized learning represents a comprehensive approach to education that emphasizes self-directed activities rooted in the learners' own organization (Chatti et al., 2010). Additionally, students are actively engaged and motivated to explore, create, and take initiative. They face the challenge of mastering the knowledge they acquire, keeping it up-to-date, making relevant connections, discarding information that is no longer useful or aligned with new developments in knowledge and experience, and generating new explanations and hypotheses.

Furthermore, personalized learning is based on a nuanced understanding of the relationship between knowing why to learn and knowing how to learn. The first aspect of this relationship focuses on aligning learning objectives with the enhancement of the student's engagement, emphasizing a values-driven behavior centered around development and effective self-actualization. The second aspect pertains to guiding educational actions towards active methodologies that promote intellectual and social self-development through self-directed learning and education. Together, these two key concepts prompt a reevaluation of the role and significance of knowledge within the framework of preparing and advancing the individual, serving as a crucial factor in shaping a modern and democratic society (Neacșu, I., 2015).

In personalized learning strategies, the teacher assumes the role of a facilitator for learning experiences. They will utilize a range of techniques, methods, and active, participatory approaches. Additionally, they will create opportunities for intellectual and practical autonomy, while also fostering the creativity, imagination, and critical thinking skills of their students. The teacher's stance should be flexible, open, and receptive to student initiatives, allowing learners to make sense of the world in their own unique ways, even if those perspectives differ from the teacher's own understanding (Cucoș C., 2006). Therefore, educators must cultivate an atmosphere of trust that is conducive to independent and creative thinking, consistently encouraging and motivating their students.

MATERIAL AND METHODS

The aim of this study was to present the most significant strategies for developing individual study skills through personalized learning among second-year students from various faculties at the University of Life Sciences "King Mihai I" in Timișoara, who are enrolled in the Pedagogy I course.

To achieve this, the research focused on the following objectives:

- Identifying opportunities for cultivating individual study skills;

- Implementing project-based techniques within the educational process, recognizing that such methods can foster a range of individual study competencies;

- Assisting students in enhancing essential skills for personalized learning, including reflection, autonomy, motivation, personal and social responsibility, as well as critical thinking.

The study was conducted during the first semester of the 2023-2024 academic year. Students collaborated in professional teams, incorporating new information and communication technologies into their teaching practices while effectively utilizing various methods and techniques to cultivate independent study skills. The educational process emphasized not only the acquisition of knowledge and specific competencies related to the subject matter but also aimed at fostering attitudes and mechanisms for personalized, conscious, and efficient learning. This approach encouraged students to apply these skills in diverse life contexts, beyond the traditional classroom setting.

RESULTS AND DISCUSSIONS

In personalized learning, individual study skills are fundamental to developing a unique learning style, cultivated through the implementation of various techniques and methods. This paper aims to highlight the key techniques and methods employed by students in agricultural higher education to enhance their individual study skills.

The strategies for cultivating these study skills encompass the following techniques (Davidescu Elena, 2018):

- ▪ Reading Techniques
- ▪ Learning Methods:
  - - Heuristic methods and techniques
  - - Communication skills and Abilities
  - - Learning through guided and independent observations
  - - Learning through research
- ▪ Information and documentation techniques
- ▪ Techniques for organizing and processing the studied sources.

1. The technique of reading is the most crucial tool for intellectual work. This skill is acquired through practice, starting in elementary school when reading and writing habits are developed. To gather a wide range of information efficiently, save time, and gain a comprehensive overview, selective reading is employed, which involves retaining key ideas, essential points, and significant keywords.

2. Learning methods are acquired under the guidance of teachers and through personal efforts. These methods serve as operational tools for gaining and applying knowledge in specific contexts while also fostering intellectual development.

▪ *Heuristic techniques* – such as inquiry, independent problem-solving, and exploration – are particularly effective in enhancing cognitive abilities. Approaches like problem formulation and resolution, searching for alternative solutions, discovery-based learning (which involves independent investigation and hypothesis formulation), brainstorming, SINELG technique, Philips 6-6, and case studies (inductive knowledge

acquisition) contribute to stimulating the flow of ideas and fostering knowledge-oriented attitudes, such as curiosity, openness to new concepts, and the satisfaction derived from uncovering truths. These methods also encourage perseverance, independence, and tenacity, ultimately exercising the willpower necessary for sustained effort (Macavei E., 2001).

▪ *Communication skills and abilities*—such as clear, concise, expressive, and logical presentation, maintaining dialogue (effectively sharing one's ideas and beliefs), active listening and recounting events with well-structured arguments—are crucial behavioral elements that significantly enhance the likelihood of success in academic, professional, and social spheres.

▪ *Learning through guided and independent observation* enhances one's ability to perceive, detect hidden elements, and actively and systematically monitor objects and phenomena across various fields. The skill of documenting facts in personal journals and observation protocols is essential for effectively utilizing data in subsequent stages of knowledge acquisition.

▪ *Research-based learning* is enhanced through the acquisition of knowledge and skills essential for organizing experimental frameworks, as well as employing various investigative methods and techniques for analysis and interpretation. An interest in scientific research and a supportive attitude towards it often develop during school and university years. Through certain educational activities, such as laboratory work and projects, along with extracurricular engagements like research clubs and groups, students become acquainted with the research process. This encompasses understanding both universal and specific research methods and techniques, honing the ability to apply these methods, and learning how to effectively organize research activities and set up experimental conditions. This includes defining research themes, clarifying goals and objectives, formulating hypotheses, creating optimal conditions (such as environment, instruments, and equipment), identifying independent and dependent variables, selecting samples, and preparing them (Macavei E., 2001). Additionally, it involves mastering techniques for data documentation and information processing, as well as understanding and applying methods for data collection, analysis, interpretation, and validation of results.

3. Information and documentation techniques are essential for absorbing ideas through reading and utilizing various documentary resources such as images, manuscripts, scientific articles, and more. Through the process of information gathering and documentation, individuals can gauge their understanding and practical skills within a specific area of interest, as well as assess performance levels, identify gaps and limitations, and recognize the significance of particular issues. Information and documentation involve consulting various information systems, including traditional bibliographic systems, computerized bibliographic systems, electronic library resources, internet-based information sources, specialized documentation centers, and media information systems. It is crucial for students to learn how to effectively use these information sources and to understand the types of information they can access, while also being able to accurately evaluate their relevance and value. Consequently, the process of information gathering and documentation comprises several key stages: identifying sources, analyzing their relevance (including authenticity and informational value), selecting the appropriate information sources, and studying and processing the gathered information (Macavei E., 2001).

4. The techniques for organizing and processing the studied sources hinge on the systematic arrangement of knowledge acquired during the information-gathering and research phase, enabling its effective utilization. The accuracy and precision in recording this data directly influence the efficiency of its processing and application. During the reading phase, initial impressions are noted—either in the margins of the text or in a dedicated journal.

Following this, summaries, outlines, and working documents are created to encapsulate the key points.

CONCLUSIONS

Current research suggests that personalized learning can significantly enhance students' motivation, engagement, and awareness (Pontual Falcão et al., 2018), while also playing a key role in boosting overall satisfaction and success in education (Gómez et al., 2014).

Acquiring a personal learning style demonstrates its effectiveness through several key aspects: fostering and sustaining intrinsic motivation, efficiently selecting and organizing information, enhancing professional development and skills, promoting self-directed learning and lifelong education, and improving overall mental health standards.

The implementation of personalized learning demands not only a reevaluation of teaching methodologies and organizational structures but also a fundamental shift in the role of the educator. For students to thrive in a personalized learning environment, they need both psychological and pedagogical support. Research has indicated that emotional and psychological backing from teachers is vital to students' academic success (Tapalova et al., 2018).

A tailored strategy fosters essential skills such as reflection, autonomy, motivation, personal and social responsibility, and critical thinking among today's learners. Viewed as a comprehensive approach, it encompasses a wide array of educational practices designed to cater to the unique strengths and weaknesses of each student (Hachfeld & Lazarides, 2020; Tapalova, 2014).

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