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HIERARCHICAL STRUCTURAL MODELING OF PSYCHOLOGICAL DETERMINANTS OF ACADEMIC QUALITY AND SOCIAL MATURITY IN UNIVERSITY STUDENTS

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Abstract: This paper presents a structural framework for understanding social maturity as a multi-tier integrative construct bridging personal values, motivation, communicative competence, and reflective self-regulation in university students. Based on empirical investigations across N=350 students, a 4-tier Hierarchical Model of Social Maturity Development was established and validated. The mediational role of interpersonal reflection in interiorizing social values into behavioral responsibility is demonstrated, alongside formal implementation outcomes at Tashkent State Pedagogical University (Order No. PM-374).

Keywords: Hierarchical structural modeling, psychological determinants, social maturity, academic quality, interiorization, mediational role, reflection.

Аннотация: В данной статье представлена структурная модель понимания социальной зрелости как многоуровневого интегративного образования, объединяющего личностные ценности, мотивацию, коммуникативную компетентность и рефлексивную саморегуляцию студентов высших учебных заведений. На основе эмпирических исследований, проведённых среди N=350 студентов, была разработана и подтверждена 4-уровневая иерархическая модель развития социальной зрелости. Продемонстрирована медиаторная роль межличностной рефлексии в процессе интериоризации социальных ценностей и их преобразовании в поведенческую ответственность, а также представлены результаты формального внедрения модели в Ташкентском государственном педагогическом университете (Приказ № PM-374).

Ключевые слова: иерархическое структурное моделирование, психологические детерминанты, социальная зрелость, качество образования, интериоризация, медиаторная роль, рефлексия.

Annotatsiya: Mazkur maqolada ijtimoiy yetuklikni universitet talabalari shaxsiy qadriyatlari, motivatsiyasi, kommunikativ kompetentligi va refleksiv o‘zini-o‘zi boshqarishini birlashtiruvchi ko‘p bosqichli integrativ tuzilma sifatida tushunishning strukturaviy modeli keltirilgan. N=350 nafar talaba ishtirokidagi empirik tadqiqotlar asosida ijtimoiy yetuklik rivojlanishining 4 bosqichli iyerarxik modeli ishlab chiqildi va tasdiqlandi. Shaxslararo refleksiyaning ijtimoiy qadriyatlarni xulq-atvor mas’uliyatiga aylantirish jarayonidagi vositachilik roli ko‘rsatib berildi, shuningdek, modelning Toshkent davlat pedagogika universitetida rasmiy joriy etish natijalari (PM-374-son buyruq) yoritildi.

Kalit so‘zlar: iyerarxik strukturaviy modellashtirish, psixologik determinantlar, ijtimoiy yetuklik, ta’lim sifati, ichkilashtirish, vositachilik roli, refleksiya.

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1. INTRODUCTION

Global educational transformations, digitalization processes, and increasing demands for professional competence require the development of new conceptual models that integrate students' cognitive abilities with social responsibility and personal maturity. Modern higher education is no longer limited to the transmission of professional knowledge; it also aims to develop individuals who are capable of independent decision-making, effective communication, social adaptation, and responsible participation in society.

Within this context, social maturity is considered one of the essential psychological characteristics determining students' academic success, professional development, and social integration. Traditionally, social maturity has often been viewed as a stable personal characteristic; however, contemporary psychological approaches interpret it as a dynamic and developing hierarchical system influenced by internal psychological determinants, social experience, and educational conditions.

Social maturity represents a complex integrative formation that includes motivational orientation, cognitive understanding of social norms, emotional-communicative competence, and reflective self-regulation. These components are interconnected and develop progressively during the student period, when individuals actively form professional identity, personal values, and social responsibility.

The psychological foundations of social maturity are reflected in the works of A. Bandura, who emphasized the role of social learning mechanisms in personality development and highlighted the importance of interaction between personal factors and social environment. Humanistic approaches of A. Maslow and C. Rogers also underline that mature personality development is associated with self-actualization, self-awareness, and constructive interaction with others.

Therefore, the development of structural models explaining the formation mechanisms of social maturity among university students represents an important scientific task. Such models allow identifying psychological determinants that influence students' academic behavior, professional readiness, and social competence.

The purpose of this study is to develop and validate a hierarchical structural model of social maturity development among university students and to determine the psychological mechanisms that contribute to the transformation of social values into responsible behavior.

2. METHODS AND CONCEPTUAL FRAMEWORK

The study was conducted based on empirical data obtained from **N=350 university students**. The research methodology was developed within the framework of systemic, structural-functional, and psychological modeling approaches.

The research combined quantitative and conceptual analysis methods, including:

- multivariate statistical analysis;
- correlation analysis;
- structural modeling principles;
- pathway analysis concepts;
- theoretical synthesis of psychological approaches.

The conceptual framework of the research was based on the assumption that social maturity develops as a hierarchical system consisting of interconnected psychological components. Each component performs a specific regulatory function and contributes to the formation of socially responsible behavior.

The empirical findings obtained during the research were further integrated into the educational environment of the Psychological Scientific-Educational Center under Tashkent State Pedagogical University through formal implementation mechanisms based on Order No. PM-374.

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The developed framework was aimed at improving psychological support programs in higher education institutions and creating conditions for purposeful development of students' personal and social competencies.

3. THE 4-TIER HIERARCHICAL MODEL OF SOCIAL MATURITY DEVELOPMENT

Based on theoretical analysis and empirical findings, the **4-tier Hierarchical Model of Social Maturity Development** was developed and validated. The model represents a sequence of interconnected psychological levels that gradually transform individual potential into socially responsible behavior.

Tier I: Motivational Component

The first level represents the motivational foundation of social maturity. It includes internal and external learning motives, personal aspirations, achievement orientation, and value-based attitudes toward education.

At this level, students develop awareness of the relationship between personal goals and academic activities. Strong internal motivation contributes to active participation in learning, increases responsibility for educational outcomes, and decreases academic amotivation.The motivational component performs a regulatory function by determining the direction and stability of students' behavior. Students with developed motivational maturity demonstrate greater persistence, goal orientation, and readiness for self-development.

Tier II: Cognitive Component

The second level includes students' understanding of social norms, moral principles, responsible decision-making strategies, and self-management mechanisms.

The cognitive component reflects the intellectual basis of social maturity, allowing students to analyze social situations, predict consequences of their actions, and make responsible choices. At this stage, students develop awareness of their social roles and responsibilities. Cognitive maturity contributes to effective problem-solving, rational decision-making, and adaptation to academic and professional requirements.

Tier III: Emotional-Communicative Component

The third level represents emotional regulation and interpersonal interaction skills. It includes emotional stability, empathy, constructive communication, and communicative tolerance.

This component plays an important role in students' ability to establish productive relationships within peer groups and professional environments. Emotional competence allows students to understand others' feelings, regulate personal emotional reactions, and resolve interpersonal conflicts constructively. The development of communicative tolerance creates conditions for cooperation, respect for diversity, and effective teamwork, which are essential qualities of a modern specialist.

Tier IV: Reflective Component

The fourth level represents the highest regulatory mechanism of social maturity. It includes self-awareness, retrospective analysis of personal experience, future planning, and reflective self-regulation.

Reflection acts as a mechanism that connects personal experience with social values and transforms external requirements into internal beliefs and behavioral principles. Through reflection, students evaluate their actions, understand personal strengths and limitations, and consciously regulate their professional and social development. The reflective component functions as an interiorization mechanism, ensuring that social values become stable personal qualities and responsible behavioral patterns.

4. DISCUSSION AND MEDIATIONAL MECHANISMS

The obtained theoretical and empirical results demonstrate that interpersonal reflection plays a central mediational role in the development of social maturity.

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Reflection serves as a psychological bridge between internal personality characteristics and external social requirements. Through reflective processes, students analyze their attitudes, behaviors, and interpersonal experiences, which contributes to the transformation of social norms into personal values.

The mediation mechanism can be explained through several psychological relationships:

- **Constructive self-confidence → Personal Responsibility.**

Students who possess positive self-attitudes demonstrate greater willingness to accept responsibility for their decisions and actions.

- **Self-management ability → Cooperation.**

The ability to regulate personal behavior and emotions enhances students' capacity for teamwork and constructive interaction.

- **Group sincerity and openness → Tolerance.**

A psychologically safe communication environment promotes acceptance of different perspectives and development of respectful relationships.

Thus, reflection ensures the internalization of social values and their transition into stable behavioral characteristics. This mechanism contributes to sustainable academic achievement, professional readiness, and successful social integration.

The developed model demonstrates that social maturity should not be considered as a single psychological trait but as a hierarchical system where motivational, cognitive, emotional-communicative, and reflective components continuously interact.

5. CONCLUSION

The results of the study allow the following conclusions to be drawn:

1. The developed **4-tier Hierarchical Model of Social Maturity Development** provides a comprehensive theoretical and practical framework for understanding and cultivating students' social maturity.
2. Social maturity represents a dynamic psychological system that develops through the interaction of motivational, cognitive, emotional-communicative, and reflective components.
3. Interpersonal reflection functions as a key mediating mechanism that transforms social values into personal responsibility and socially appropriate behavior.
4. Integration of reflective and emotional-communicative training modules into university curricula contributes to improving students' academic motivation, social competence, and professional readiness.
5. The implementation of the hierarchical model within higher education institutions creates psychological conditions for improving educational quality and preparing socially responsible specialists.

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