AGE AND PSYCHOLOGICAL CHARACTERISTICS OF HIGH SCHOOL STUDENTS AS A FACTOR IN THE FORMATION OF COMPETENCIES

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Annotatsiya

Mazkur maqolada o‘rta maktab o‘quvchilarining yosh va psixologik xususiyatlari kompetensiyalar shakllanishiga ta’siri o‘rganiladi. Kompetensiyalarni shakllantirishda yosh o‘zgarishlari, psixologik rivojlanish bosqichlari va individual farqlar muhim ahamiyat kasb etishi ilmiy asoslangan holda tahlil qilinadi. Jahon va mintaqaviy tadqiqotlar natijalari, klassik va zamonaviy nazariyalar, shuningdek, empirik tadqiqotlar asosida ushbu masalaga yondashuvlar yoritiladi. Tahlil natijalari yuqori sinf o‘quvchilarida kompetensiyalarni rivojlantirishning samarali yo‘llarini aniqlashga yordam beradi.

Kalit so'zlar

yosh xususiyatlari, psixologik omillar, kompetensiyalar, o‘rta maktab o‘quvchilari

Abstract

This article examines the influence of age and psychological characteristics of high school students on the formation of competencies. The study provides a scientific analysis of how age-related changes, psychological developmental stages, and individual differences play a pivotal role in competency development. Drawing on global and regional research, as well as classical and contemporary theories and empirical evidence, the article explores various approaches to this issue. The analysis aims to identify effective strategies for fostering competencies among high school students.

Keywords

age characteristics, psychological factors, competencies, high school students

Аннотация

В данной статье исследуется влияние возрастных и психологических особенностей старшеклассников на формирование компетенций. Научный анализ включает рассмотрение возрастных изменений, этапов психологического развития и индивидуальных различий как ключевых факторов в развитии компетенций. Используются результаты мировых и региональных исследований, классические и

современные теории, а также эмпирические данные. Анализ позволяет определить эффективные пути развития компетенций у старшеклассников.

Ключевые слова

возрастные особенности, психологические факторы, компетенции, старшеклассники

Introduction

The development of competencies among high school students has become a central focus in educational psychology and pedagogy, reflecting broader shifts in educational policy and practice worldwide. As societies increasingly demand adaptable, lifelong learners equipped with a diverse set of skills, understanding the factors that shape competency formation is of paramount importance. Among these, age and psychological characteristics stand out as critical determinants, influencing not only cognitive and emotional development but also motivation, self-regulation, and social adaptation. While competency-based education frameworks provide a general roadmap for desired outcomes, the heterogeneity of adolescent development presents both challenges and opportunities for educators. The intersection of age-related developmental processes and psychological factors with the acquisition of key competencies—such as critical thinking, communication, collaboration, and self-management—warrants detailed investigation. This article seeks to synthesize theoretical and empirical insights into how these variables interact, drawing on classical foundations, national and regional research contributions, and contemporary debates to inform effective educational strategies for high school learners.

Literature Review

The exploration of age and psychological characteristics as determinants in the formation of competencies among high school students is grounded in a rich and multifaceted theoretical landscape. Early conceptualizations of educational development, most notably those advanced by Jean Piaget, established the importance of cognitive developmental stages in structuring the acquisition of new skills and understandings. Piaget's theory, emphasizing the transition from concrete operational to formal operational thought during adolescence, underscores the emergence of abstract reasoning, hypothetical thinking, and metacognitive abilities critical to competency formation. This theoretical framework has been foundational for subsequent research, as it delineates the age-related cognitive transformations that underpin the capacity for complex problem-solving and reflective learning—core elements of modern competency models[1]. However, Piaget's stage-based approach has been critiqued for underestimating individual variability and the role of environmental factors, prompting the integration of Vygotskian sociocultural theory into the discourse. Vygotsky's emphasis on the social context of learning, particularly the concept of the zone of

proximal development, situates competency formation within the scaffolding provided by teachers, peers, and cultural tools. This perspective foregrounds the dynamic interplay between psychological maturation and social interaction, suggesting that competencies are co-constructed through guided participation and meaningful activity.

Historical developments in the understanding of adolescent psychological characteristics have further enriched the analysis of competency development. Erik Erikson's psychosocial theory identified adolescence as a period of identity versus role confusion, highlighting the centrality of self-concept, autonomy, and social affiliation. These psychosocial dynamics influence not only personal development but also the motivation and engagement necessary for acquiring competencies. Contemporary scholars have expanded on Erikson's insights, examining how self-efficacy, motivation, and emotional intelligence mediate the relationship between age and competency acquisition. Bandura's social cognitive theory, for instance, posits that self-efficacy beliefs, shaped by developmental experiences and social modeling, are crucial predictors of students' willingness to engage in challenging tasks and persist in the face of difficulties. In this light, age-related changes in self-concept and self-regulation are seen as both outcomes of psychological development and prerequisites for the effective internalization of competencies.

The evolution of competency-based education frameworks in the late twentieth and early twenty-first centuries has brought renewed attention to the role of psychological and developmental factors. The Organisation for Economic Co-operation and Development (OECD) and other international bodies have emphasized key competencies—such as problem-solving, collaboration, and adaptability—as essential outcomes for lifelong learning and workforce readiness. These frameworks recognize the multidimensional nature of competencies, encompassing cognitive, affective, and social domains. Within this context, age and psychological characteristics are acknowledged as mediating variables that shape not only the pace but also the trajectory of competency development. Empirical research has sought to operationalize these frameworks, employing longitudinal and cross-sectional designs to track the evolution of competencies across adolescence. For example, studies utilizing the Programme for International Student Assessment (PISA) data have revealed significant age-related differences in competencies such as reading literacy, mathematical reasoning, and scientific inquiry, with psychological factors such as motivation, perseverance, and self-belief accounting for much of the observed variance[2].

The contribution of regional and national scholars has been instrumental in contextualizing these global frameworks to the specificities of local educational systems. In the context of Central Asia and Uzbekistan, research has highlighted the importance of aligning competency-based curricula with the developmental characteristics of high school students. Scholars such as T. M. Tashkenbaeva and N. A. Gafurov have

emphasized the necessity of considering cultural norms, family expectations, and linguistic backgrounds in designing educational interventions that promote competency development. Their work underscores the variability in psychological readiness for competency acquisition, noting that students' age-appropriate cognitive and emotional capacities must be matched by corresponding pedagogical strategies. Similarly, Russian educational psychologists, including V. V. Davydov and D. B. Elkonin, have advanced activity theory as a framework for understanding how age-related psychological changes interact with structured learning activities to foster competencies. Activity theory posits that learning is not merely the internalization of knowledge but the transformation of psychological functions through participation in goal-directed, socially mediated practices. This perspective has informed curriculum reforms that seek to balance the demands of standardized competency frameworks with the developmental realities of adolescent learners.

Empirical studies conducted in various national contexts further illuminate the complex interplay between age, psychological characteristics, and competency formation. Quantitative investigations have consistently demonstrated that older high school students, particularly those in the final years of secondary education, exhibit higher levels of certain competencies compared to their younger peers. This pattern is attributed to both maturational factors and cumulative exposure to competency-oriented instruction. For instance, a longitudinal study conducted in Germany found that students' self-regulatory and collaborative competencies increased steadily from grades 9 to 12, with age-related gains mediated by improvements in metacognitive awareness and peer interaction skills. In contrast, research in East Asian settings has drawn attention to the role of psychological stress and academic pressure in moderating the relationship between age and competency development, suggesting that developmental gains may be attenuated by contextual factors such as high-stakes testing and rigid curricular demands.

Qualitative research has provided further nuance by exploring students' subjective experiences of competency formation. In-depth interviews and focus groups with high school students in Uzbekistan, for example, reveal that age-related increases in autonomy and self-reflection are accompanied by heightened sensitivity to peer influence and social comparison. These psychological dynamics can either facilitate or hinder the acquisition of competencies, depending on the nature of classroom interactions and the availability of supportive relationships. Teachers report that older students are generally more capable of engaging in critical discussion, collaborative problem-solving, and self-directed learning, but also face greater challenges related to motivation, anxiety, and identity negotiation. Such findings point to the importance of differentiated instructional approaches that account for both age-related capacities and individual psychological profiles.

Critical analysis of the literature reveals ongoing debates regarding the relative weight of age versus psychological characteristics in competency formation. Some scholars argue for a predominantly developmentalist perspective, positing that age-related cognitive and emotional maturation is the primary driver of competency acquisition. Others contend that psychological variables such as motivation, self-concept, and emotional regulation are equally, if not more, influential, particularly in diverse and rapidly changing educational environments. The interplay between these factors is further complicated by socio-cultural influences, including family background, peer networks, and societal expectations. For example, research in post-Soviet contexts has shown that traditional values and hierarchical teacher-student relationships can both support and constrain the development of competencies, depending on how they interact with students' psychological readiness and developmental needs[3].

Recent meta-analyses have sought to synthesize these diverse strands of research, emphasizing the need for integrative models that account for the multifactorial nature of competency formation. Such models highlight the reciprocal relationships among age, psychological characteristics, and contextual variables, suggesting that effective educational interventions must be tailored to the developmental profiles of learners. For instance, interventions that promote metacognitive strategies and self-regulation have been shown to be particularly effective among older high school students, who possess the requisite cognitive maturity to benefit from such approaches. Conversely, efforts to foster collaboration and communication competencies may require greater scaffolding and support among younger students, whose psychological and social capacities are still developing.

The literature also points to the significance of individual differences within age cohorts, challenging the assumption of uniform developmental trajectories. Factors such as gender, socio-economic status, and prior educational experiences intersect with age and psychological characteristics to shape competency development. In Uzbekistan, for instance, gendered expectations regarding academic achievement and career aspirations influence both the opportunities and barriers faced by high school students in acquiring competencies. Similarly, students from rural or disadvantaged backgrounds may experience delays in psychological development due to limited access to educational resources, underscoring the need for targeted interventions that address both developmental and contextual challenges. Empirical studies in this context have demonstrated that tailored support, including mentorship programs and culturally responsive pedagogy, can mitigate disparities and promote more equitable competency outcomes[4].

A further dimension of the literature concerns the role of digital technologies in mediating the relationship between age, psychological characteristics, and competency formation. The proliferation of digital learning environments has introduced new

opportunities and challenges for high school students, whose developmental readiness for self-directed and collaborative online learning varies widely. Research indicates that older students, with more advanced cognitive and self-regulatory skills, are better equipped to navigate the demands of digital learning platforms and to engage in autonomous learning. However, psychological factors such as digital self-efficacy, motivation, and resilience play a critical role in determining the extent to which students benefit from these technologies. Studies conducted in Uzbekistan and other post-Soviet countries highlight the digital divide between urban and rural students, as well as the need for age-appropriate digital literacy interventions that support the development of competencies in online contexts[5].

Debates continue regarding the most effective strategies for aligning competency-based education with the developmental and psychological profiles of high school students. Some educators advocate for flexible curricula that allow for individualized pacing and differentiated instruction, while others emphasize the importance of standardized benchmarks and accountability measures. The literature suggests that a balanced approach is necessary, one that recognizes the diversity of adolescent development and the centrality of psychological support. In practice, this entails the use of formative assessment, personalized feedback, and collaborative learning structures that are responsive to students' age-related capacities and psychological needs. Programs that integrate social-emotional learning with academic competency development have been shown to yield positive outcomes, particularly when implemented in a supportive school climate that values student agency and well-being.

In synthesizing the theoretical, empirical, and practical dimensions of the literature, it is evident that age and psychological characteristics are deeply intertwined in shaping the formation of competencies among high school students. The dynamic interplay of cognitive development, psychosocial maturation, motivational processes, and contextual influences necessitates a holistic approach to educational design and policy. Future research is called upon to further elucidate the mechanisms through which these factors interact, with particular attention to the diversity of student experiences and the evolving demands of contemporary education. The ongoing refinement of competency-based frameworks should be informed by robust evidence and a commitment to equity, ensuring that all students are supported in realizing their developmental potential[6].

Conclusion

The comprehensive analysis of age and psychological characteristics as factors in the formation of competencies among high school students demonstrates the necessity of adopting a holistic and context-sensitive approach to educational practice and policy. Classical and contemporary theories underscore that age-related cognitive and psychosocial development provides a foundation for the acquisition of key

competencies, yet the process is profoundly shaped by individual psychological traits and the broader socio-cultural environment. Empirical research from global, regional, and national perspectives reveals that while maturational factors facilitate the progression of competency development, psychological variables such as motivation, self-efficacy, and emotional regulation can accelerate, inhibit, or redirect this trajectory. The literature further highlights the importance of recognizing intra-cohort variability, which is influenced by gender, socio-economic status, cultural context, and access to educational resources. Effective strategies for fostering competencies among high school students must therefore integrate developmental science with differentiated instruction, formative assessment, and social-emotional support. Digital technologies and innovative pedagogical approaches offer new avenues for competency development but require careful alignment with students' age-related readiness and psychological needs. As educational systems continue to evolve in response to societal demands, ongoing research and practice must remain attentive to the complex interplay of factors that shape adolescent learning. Ultimately, the goal is to create inclusive, adaptive, and supportive learning environments that empower all students to realize their full potential as competent, confident, and engaged members of society.

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