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Research on the Mechanism of University Students' Subject Interest-Knowledge Sharing

Gao Qian¹  and Li Fuqiang^{2*} 

¹School of History and Culture, Southwest University, Chongqing, China. E-mail: 549212545@qq.com

²College of Teacher Education, Southwest University, Chongqing, China. E-mail: lifq0359@163.com

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Abstract

Enhancement of undergraduate learning quality has become a pressing concern in higher education. Thus, analyses the development of motivation and subsequent student learning behavior is needed. Based on the self-determination theory and the theory of dynamic knowledge creation, this study investigates the relationships among subject interest, subject-specific self-concept, subject enthusiasm, self-regulated learning behavior, and knowledge sharing, while examining the mediating effect of subject-specific self-concept. Through questionnaire surveys, statistical analyses were conducted on 438 valid responses using SmartPLS. The results indicate that: (1) Subject interest directly and positively influences subject-specific self-concept and subject enthusiasm. (2) Subject-specific self-concept directly and positively influences subject enthusiasm. (3) Subject enthusiasm directly and positively influences self-regulated learning behavior. (4) Self-regulated learning behavior directly and positively influences knowledge sharing. (5) Subject-specific self-concept mediates the relationship between subject interest and subject enthusiasm. The results help understand the influence mechanism of individual motivation on the learning behaviors of university students.

Keywords: *Subject interest, Subject-specific self-concept, Subject enthusiasm, Self-regulated learning behavior, Knowledge sharing*

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1. Introduction

In recent years, the improvement of undergraduate learning quality has emerged as a pressing concern in higher education, especially in humanities fields like history. Students' interest declines throughout the study programs (Wild and Kunina-Habenicht, 2025), and motivation decreases in higher education can lead to dropout (Wild et al., 2024). Consequently, analyzing the development of motivation and subsequent student behavior is necessary (Wild et al., 2024).

To conduct an in-depth research, there are several interconnected psychological constructs require attention: subject interest, which acts as the initial motivational impetus; subject-specific self-concept, which reflects students' domain-specific competence beliefs; subject enthusiasm, which represents the emotional-affective manifestation of motivation; self-regulated learning behavior, which includes the strategic management of learning processes; and

* Corresponding author: Li Fuqiang, College of Teacher Education, Southwest University, Chongqing, China. E-mail: lifq0359@163.com

knowledge sharing, which is an important collaborative outcome of deep learning. Addressing the current crisis in undergraduate historical education, where passive reception takes precedence over active knowledge construction, requires an understanding of the complex relationships among these variables, including how initial motivational dispositions translate into concrete collaborative learning behaviors.

Existing research has demonstrated the fundamental significance of these constructs. Subject interest has been identified as a significant predictor of academic achievement and persistence (Wild and Kunina-Habenicht, 2025). Furthermore, subject interest serves not only as a driver of academic engagement, but also the foundation for career decision-making (Altuwaijri *et al.*, 2025). Students who establish notable subject interests are more likely to seek opportunities to pursue those interests in their future careers (Quinlan and Renninger, 2022). Conversely, preservice teachers' lack of subject interest has an impact on teaching and learning (Havia *et al.*, 2024).

Subject-specific self-concept has a significant impact on students' learning outcomes and has demonstrated to have predictive value for academic achievement across a variety of subjects (Rost and Feng, 2024; Weinhandl *et al.*, 2025). Additionally, self-concept can act as a mediator between several other variables. For example, it is positioned as a mediator of the relationship between university students' resilience and academic accomplishment (García-Martínez *et al.*, 2022). Researchers pointed out that interest and self-concept are affective characteristics (Kirsten *et al.*, 2025), which are important for students' subsequent achievement and study satisfaction (Kirsten *et al.*, 2025), and linked to dropout (Wild and Grassinger, 2023).

Similarly, subject enthusiasm was found to be one of the predictors of students' academic performance, hence, to cultivate academic enthusiasm, universities should build a vibrant cultural, social, and academic atmosphere (Bordbar *et al.*, 2025).

Regarding self-regulated learning, previous studies have shown its pivotal role in academic performance. Researchers have found five patterns of students' self-regulated learning behavior in the clinical environment. As part of a complex interaction between students and the learning context, these patterns varied regarding goals, metacognition, communication, effort, and dependence on external regulation for learning. As a result, it may be best to support the development of self-regulated learning behavior in light of each student's unique needs (Berkhout *et al.*, 2017).

"Learning by interaction" is one method of acquiring knowledge. According to Nonaka (1994), individuals' perspectives on the world remain personal unless they are articulated and amplified through social interaction. That means, "communities of interaction" contribute to dissemination and generate new knowledge (Nonaka, 1994). Thus, knowledge sharing has been acknowledged as an essential collaborative learning practice that promotes deeper understanding and the development of academic communities.

However, the potential relationships among these variables, particularly the sequential pathways connecting initial interest to ultimate knowledge-sharing behaviors, remain inadequately explored in the particular context of undergraduate historical education.

The current study aims to overcome these limitations by proposing an integrated model to examine the connections among subject interest, subject-specific self-concept, subject enthusiasm, self-regulated learning behavior, and knowledge sharing within undergraduate history majors. This research contributes to offering new evidence about the mechanism by which subject interest ultimately promotes knowledge sharing and helps to clarify how cognitive appraisals (self-concept) and emotional states (enthusiasm) sequentially mediate the relationship between initial interest and behavioral outcomes.

2. Literature Review and Hypotheses

2.1. Theoretical Basis

2.1.1. Self-determination Theory

Self-determination theory (SDT) is a broad framework for understanding factors that facilitate or undermine intrinsic motivation, autonomous extrinsic motivation, and psychological wellness, all issues of direct relevance to educational settings. SDT places its emphasis on people's inherent motivational propensities for learning and growing, and how they can be supported. SDT believes that intrinsic motivation, which pertains to activities done for their inherent interest and enjoyment, is likely responsible for the preponderance of human learning across the life span, as opposed to externally mandated learning and instruction (Ryan and Deci, 2020).

2.1.2. Theory of Dynamic Knowledge Creation

Nonaka proposed that knowledge is created by individuals, while interactions between individuals are usually crucial to the development of these concepts. Social interaction between individuals may lead to the expansion of knowledge (Nonaka, 1994).

2.2. Definitions of Key Variables

2.2.1. Subject Interest

Scholars have suggested definitions of the subject interest from various perspectives. Some scholars define subject interest as intrinsic motivation derived from specialty preference, inherent enjoyment, and a desire to explore the subject and acquire new skills, including affective associations and a high level of recognition of the value of the task, and being a key driver of undergraduate degree choice, academic engagement and study satisfaction (Li *et al.*, 2025; Tosto *et al.*, 2016; Skatova and Ferguson, 2014).

Others describe subject interest as a psychological state (relatively stable or developmental) or a construct that integrates cognitive, affective, and value-related components and is closely associated with sense-making and deep understanding. It is characterized by long-term engagement and a propensity to re-engage with subject-specific objects, events, or ideas (Wild and Grassinger, 2023; Quinlan and Renninger, 2022).

According to some scholars, subject interest results from interactions between individuals and learning environments or subject matter (including curricular content and broader domain-related aspects). This person-object relationship can be divided into long-term individual type and situation-triggered type, depending on the learning environment and situational instructional triggers (Schurtz *et al.*, 2014; Havia *et al.*, 2023; Yaman *et al.*, 2008).

The scale adapted from the FEMOLA questionnaire was used in this study to assess subject interest (Pohlmann and Möller, 2010; Lotz *et al.*, 2025). Three of the six subscales in the FEMOLA measure the intrinsic career choice motivation include subject interest.

2.2.2. Subject-Specific Self-Concept

Self-concept denotes personal perceptions of the self with different levels of specificity or domain. The subject-specific self-concept refers to general perceptions about a particular subject area (Huang, 2012). It is an individual's assessment of their knowledge, abilities, and values in a specific academic field (Weinhandl *et al.*, 2025; Schwinger, 2013; Oberhauser and Hertel, 2023). It can be formed and developed by subject-specific achievement (Schneider and Wolff, 2023; Gorges and Weidner, 2023) and can serve as the primary source for the formation of subject-specific value (Schneider and Wolff, 2023).

Self-concept is a hierarchical (Schroeders and Jansen, 2022) and multi-dimensional structure (Gorges and Weidner, 2023; Schmidt *et al.*, 2018). Some scholars believe that self-concept consists of two latent factors associated with perceptions of "competence" and "affect", which include their assessment of their level of competence or skill in that subject, as well as their affective responses, such as interest or enjoyment in the subject (Burns *et al.*, 2018).

Subject-specific self-concept was assessed using a scale that was adapted from the subscale of the ERBSE-L questionnaire (Retelsdorf *et al.*, 2014; Lotz *et al.*, 2025).

2.2.3. Subject Enthusiasm

In psychology, enthusiasm does not have a specific, accepted definition. Kunter *et al.* regard enthusiasm as an affective, person-specific trait that expresses the subjective feeling of enjoyment, excitement, and pleasure (Kunter *et al.*, 2011). The scale assessed subject enthusiasm was adapted from Lotz (Lotz *et al.*, 2025).

2.2.4. Self-Regulated Learning Behavior

Self-regulated learning (SRL) has become one of the most significant fields of research in educational psychology. It encompasses the cognitive, metacognitive, behavioral, motivational, and emotional/affective components of learning (Panadero, 2017).

Several models of SRL are examined by various researchers. Zimmerman proposed a Socio-cognitive perspective of SRL based on three models: a triadic model that synthesized covert, behavioral, and environmental sources of personal feedback, a multilevel model of training that starts with observational learning and advances sequentially to self-regulation, and a cyclical phase model that illustrates the interplay of metacognitive and motivational processes during learning efforts. He went on to indicate that students who establish higher goals proactively, monitor their learning

purposefully, use strategies effectively, and have responses to personal feedback not only achieve mastery more quickly, but also have greater motivation to continue their learning efforts (Zimmerman, 2013). Boekaerts has concentrated on elucidating the role of goals (Panadero, 2017), and highlighted the crucial role that both positive and negative emotions play in SRL, and outlined two distinct bottom-up strategies: volitional strategies and emotion regulation strategies (Boekaerts, 2011). Pintrich examined the connection between motivation and SRL (Pintrich and de Groot, 1990). The MASRL model (metacognitive and affective model of self-regulated learning) proposed by Efklides noted that metacognition, motivation, and affect are components of self-regulated learning (SRL) that interact, it identified two levels of functioning in SRL, the Person level and the Task \times Person level (Efklides, 2011).

In this study, self-regulated learning behavior refers to the process in which students actively and voluntarily participate in their own learning activities.

The assessment scale was created by selecting pertinent items related to self-regulated learning behavior from the "Learning Process Questionnaire" (Biggs, 1987) and modifying them to fit the actual learning circumstances of history major students.

2.2.5. Knowledge Sharing

Knowledge sharing has been acknowledged as one of the main focal areas of knowledge management (Hendriks, 1999). According to Lin (2007), knowledge sharing is a social interaction culture that involves the exchange of members' knowledge, experiences, and skills throughout the whole organization (Lin, 2007). For college students, knowledge sharing provides the opportunity to learn from others and is a crucial form of informal learning.

2.3. Research Hypotheses

2.3.1. Basic Hypotheses

With regard to the relations between interest and self-concept, some scholars find that prior interest has a positive influence on subsequent self-concept while prior self-concept has a nonsignificant influence on subsequent interest (Xu, 2018), so subject interest and subject-specific self-concept are highly correlated (Feng et al., 2022). According to Sheldrake, self-concept is present self-confidence and is most strongly predicted by interest in the subject, current grades, and praise received (Sheldrake, 2016). Therefore, the following hypothesis is put forth:

H₁: Subject interest directly and positively influences subject-specific self-concept.

Self-concept and enthusiasm for the subject were found to be positively correlated in research on pre-service primary school teachers (Meyer et al., 2025). Similarly, a study of college dance majors found that dance self-concept was associated with well-being and significantly influenced the following elements of well-being: vigor, enthusiasm, confidence, and dedication. Positive emotions and valence toward the contents of the subject, or heightened subject enthusiasm, are influenced by subject-specific self-concepts (Lotz et al., 2025). Then the following hypothesis is formulated:

H₂: Subject-specific self-concept directly and positively influences subject enthusiasm.

According to earlier research, certain aspects of intrinsic career choice motivation-such as subject-specific interest-align with aspects of subject enthusiasm (Lohbeck and Frenzel, 2022; Lotz et al., 2025). Then the third hypothesis is formulated:

H₃: Subject interest directly and positively influences subject enthusiasm.

Subject enthusiasm has an important role in promoting self-regulated learning because it has encouraged the exploration and expansion of subject knowledge (Huang et al., 2022). The employment of metacognitive SRL strategies is associated with autonomous and collaborative informal learning activities (reflection, keeping up-to-date, feedback-seeking, knowledge sharing) (Kittel and Seufert, 2023). Consequently, the following hypotheses are proposed:

H₄: Subject enthusiasm directly and positively influences self-regulated learning behavior.

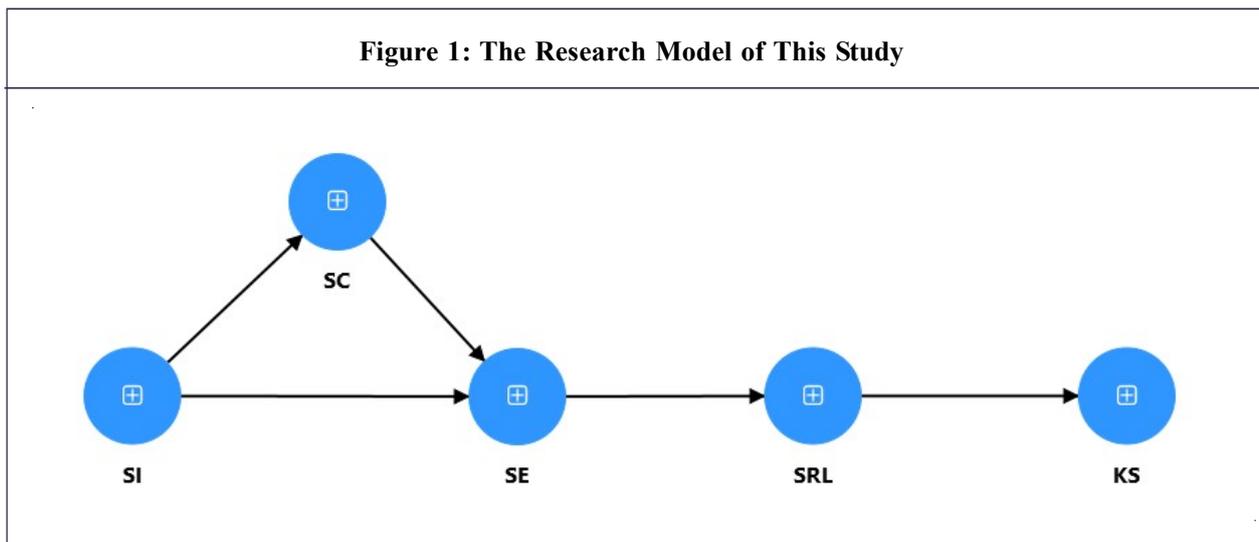
H₅: Self-regulated learning behavior directly and positively influences knowledge sharing.

2.3.2. Mediating Effect

According to the hypotheses proposed in the preceding sections (*H₁*, *H₂*, and *H₃*), subject-specific self-concept can account for the relationship between subject interest and subject enthusiasm (Lotz et al., 2025). Then the study posits the following hypothesis, and the mediation effects are empirically investigated.

H₆: Subject-specific self-concept mediates the relationship between subject interest and subject enthusiasm.

In conclusion, this study builds a model based on the assumed relationships of core variables (see Figure 1).



3. Research Methodology

3.1. Sample

A total of 535 responses were collected from undergraduate history majors in China who were given questionnaires for this study. A validity rate of 90.3% was obtained from the 483 valid questionnaires. Table 1 displays the characteristics of the samples used in this investigation.

	Characteristic	Frequency	Valid Percent
Gender	Male	94	19.5
	Female	389	80.5
Grade	Freshman	130	26.9
	Sophomore	139	28.8
	Junior Student	196	40.6
	Senior Student	18	3.7

3.2. Research Instruments

The study utilized the scale of subject interest adapted from the FEMOLA questionnaire (Pohlmann and Möller, 2010; Lotz et al., 2025), employed the scale of subject-specific self-concept adapted from the subscale of the ERBSE-L questionnaire (Retelsdorf et al., 2014; Lotz et al., 2025), adopted the subject enthusiasm scale developed by Lotz (Lotz et al., 2025), the scale of self-regulated learning behavior based on the “Learning Process Questionnaire” (Biggs, 1987), and knowledge sharing was measured using an adapted version of Huang’s (Huang et al., 2013) scale. A Likert 5-point scale is used, with scores ranging from 1 (completely non-conformance) to 5 (completely conformance).

3.3. Data Analysis

3.3.1. Reliability and Validity of the Measurement

The study utilized SmartPLS 4 to calculate the reliability and validity for the dimensions of “subject interest” (SI), “subject-specific self-concept” (SC), “subject enthusiasm” (SE), “self-regulated learning behavior” (SRL), and “knowledge sharing” (KS). The results are presented in Tables 2 and 3.

As shown in Table 2, all factor loading values are larger than 0.7, all CR values are greater than 0.7, and all AVE values are greater than 0.5, in accordance with the criteria put forth by Hair et al. (2019) and Fornell and Larcker (1981).

		Factor Loading	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
SI	SI1	0.909	0.906	0.941	0.842
	SI2	0.940			
	SI3	0.903			
SC	SC1	0.768	0.808	0.885	0.720
	SC2	0.897			
	SC3	0.875			
SE	SE1	0.881	0.917	0.941	0.800
	SE2	0.867			
	SE3	0.929			
	SE4	0.899			
SRL	SRL1	0.768	0.891	0.915	0.606
	SRL2	0.798			
	SRL3	0.739			
	SRL4	0.806			
	SRL5	0.759			
	SRL6	0.835			
	SRL7	0.738			
KS	KS1	0.903	0.887	0.930	0.815
	KS2	0.908			
	KS3	0.898			

The square root of the AVE for each construct is greater than the correlations between the construct and any other construct, as indicated in Table 3, values of HTMT less than 0.85. According to Fornell and Larcker (1981) criteria, they provide strong proof of discriminant validity.

	KS	SC	SE	SI	SRL
KS	0.903	0.323	0.446	0.416	0.619
SC	0.290	0.848	0.798	0.657	0.632
SE	0.410	0.712	0.895	0.809	0.659
SI	0.381	0.584	0.739	0.918	0.563
SRL	0.562	0.548	0.598	0.511	0.778

Note: Bold values of the diagonal are the square root of the AVE, and the lower triangle is the Pearson correlation of the corresponding dimension. The upper triangle is the values of HTMT.

3.3.2. Model Fit Indices

The model fit indices are as follows: GOF=0.564, NFI=0.863, and SRMR=0.073. on the whole, the model demonstrates a good fit.

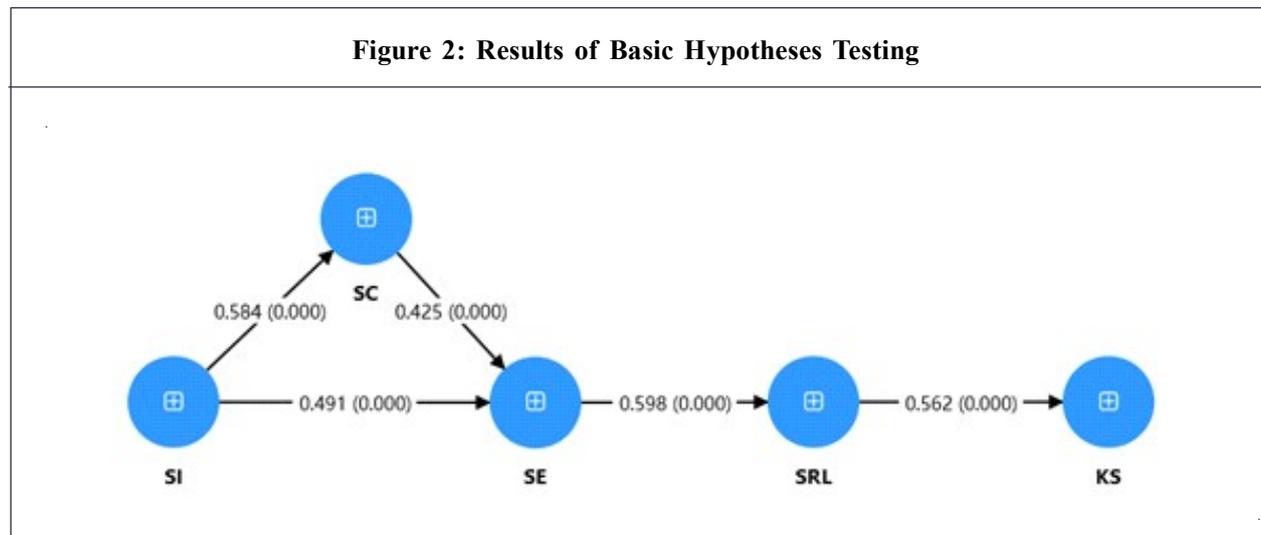
4. Results

The results of the hypotheses testing are presented below, and SmartPLS 4 was used to validate the theoretical model developed in the study.

4.1. Basic Hypotheses Testing

Table 4 and Figure 2 show the findings of testing the relationships between variables in the research hypotheses. All of the hypotheses were validated and supported, as the table shows.

No.	Dependent Variable	Independent Variable	Estimate	SE	Est./SE	p-Value	
H1	SC	SI	0.584	0.032	18.025	0.000	Support
H2	SE	SC	0.425	0.034	12.375	0.000	Support
H3	SE	SI	0.491	0.036	13.715	0.000	Support
H4	SRL	SE	0.598	0.045	13.443	0.000	Support
H5	KS	SRL	0.562	0.031	17.934	0.000	Support



4.2. Mediation Effect Testing

The total effect, direct effect, and indirect effect of “subject interest” (SI) on “subject enthusiasm” (SE) are presented in Table 5.

As shown in Table 5, the total effect of “subject interest” (SI) on “subject enthusiasm” (SE) is statistically significant ($p < 0.001$), the indirect effect is significant ($p < 0.001$), and the direct effect is also significant ($p < 0.001$), indicating that

Mediation		Estimate	SE	Est./SE	p-Value
SI→SC→SE	Total Effect	0.739	0.026	28.063	0.000
	Direct Effect	0.491	0.036	13.715	0.000
	Indirect Effect	0.248	0.021	11.770	0.000

“subject-specific self-concept” (SC) demonstrate a significant mediating role in the relationship between “subject interest” (SI) and “subject enthusiasm” (SE), thus supporting hypothesis 6.

5. Conclusion and Recommendations

5.1. A Sequential Process From Subject Interest to Knowledge Sharing

The current research lays out a comprehensive sequential mechanism that clarifies the developmental path from undergraduates’ initial interest in a subject to their final knowledge-sharing behaviors. In the field of humanities education, this four-stage pathway- which includes subject interest, subject-specific self-concept, subject enthusiasm, self-regulated learning behavior, and knowledge sharing- represents an advancement in understanding how affective and cognitive factors combine to produce collaborative learning outcomes.

The empirical validation of this sequential model demonstrates that subject interest serves as the primary motivating factor, positively influencing both subject-specific self-concept and subject enthusiasm. This initiates a series of motivational and behavioral transformations that culminate in knowledge sharing.

5.2. Mediating Role of Subject-Specific Self-Concept in Boosting Subject Enthusiasm

One of the pivotal mediators in the transition from subject interest to subject enthusiasm is subject-specific self-concept.

The empirical findings show that subject-specific self-concept not only receives a positive impact from subject interest but also exerts a significant positive effect on subject enthusiasm. This mediating function places subject-specific self-concept in the position of a cognitive-affective bridge that converts initial attraction into sustained emotional investment in the discipline.

This discovery suggests that in order to maintain a deep-seated enthusiasm for the subject, interest alone is insufficient and must be transformed into confidence in one’s ability through successful experiences.

5.3. Self-Regulated Learning Behavior is Activated by Subject Enthusiasm

The empirical results demonstrate that self-regulated learning behavior is positively influenced by subject enthusiasm, indicating that emotional engagement with history serves as an energetic foundation for learning endeavors. The result suggests that subject enthusiasm-emotional involvement with the discipline of history-plays a crucial role in activating self-regulated learning behaviors. This specificity is important because interventions that aim to cultivate genuine emotional connection to the specific subject matter may be more effective than those that target general academic enthusiasm.

5.4. Self-Regulated Learning Behavior Can Promote Knowledge Sharing in Humanities Education

The present study demonstrates that self-regulated learning behavior positively influences knowledge sharing among history majors. Students who are good at managing their learning process typically possess a more organized knowledge structure and a higher level of metacognition. This provides them with a content foundation and confidence in their capacity to share knowledge effectively. At the same time, students’ ability to make implicit knowledge explicit and fragmented knowledge systematic may also be improved by reflection and integration during the self-regulated learning process.

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References

- Altuwaijri, A.E., Klakattawi, H.S. and Alsaggaf, I. A. (2025). [Advancing Saudi Vision 2030 for Sustainable Development: Modeling Influencing Factors on Adolescents’ Choice of STEM Careers Using Structural Equation Modeling, with a Comparative Analysis of Bahrain and Singapore. *Sustainability*, 17\(7\), 2870. doi: https://doi.org/10.3390/su17072870](https://doi.org/10.3390/su17072870)

- Berkhout, J.J., Teunissen, P.W., Helmich, E., van Exel, J., van der Vleuten, C.P. and Jaarsma, D.A. (2017). *Patterns in Clinical Students' Self-Regulated Learning Behavior: A Q-Methodology Study. Advances in Health Sciences Education, 22*(1), 105-121. doi: <https://doi.org/10.1007/s10459-016-9687-4>
- Biggs, J.B. (1987). *Learning Process Questionnaire Manual. Student Approaches to Learning and Studying.* Australian Council for Educational Research Ltd., Radford House, Frederick St., Hawthorn 3122, Australia.
- Boekaerts, M. (2011). Emotions, Emotion Regulation, and Self-Regulation of Learning: Center For the Study of Learning and Instruction, Leiden University, the Netherlands, and KU Leuven. in *Handbook of Self-Regulation of Learning and Performance* (pp. 422-439). Routledge. doi: <https://doi.org/10.4324/9780203839010>
- Bordbar, S., Mirzaei, S., Bahmaei, J., Atashbahar, O. and Yusefi, A.R. (2025). Predicting Students' Academic Performance Based on Academic Identity, Academic Excitement, and Academic Enthusiasm: Evidence From A Cross-Sectional Study in A Developing Country. *BMC Medical Education, 25*(1), 768. doi: <https://doi.org/10.1186/s12909-025-07374-6>
- Burns, R.A., Crisp, D.A. and Burns, R.B. (2018). Competence and Affect Dimensions of Self-Concept Among Higher Education Students: A Factorial Validation Study of An Academic Subject-Specific Self-Concept. *European Journal of Psychology of Education, 33*(4), 649-663. doi: <https://doi.org/10.1007/s10212-018-0369-x>
- Efklides, A. (2011). Interactions of Metacognition With Motivation and Affect in Self-Regulated Learning: the MASRL Model. *Educational Psychologist, 46*(1), 6-25. doi: <https://doi.org/10.1080/00461520.2011.538645>
- Feng, X., Wang, J.L. and Rost, D.H. (2022). Subject-specific Interests and Subject-Specific Self-Concepts. *Zeitschrift für Pädagogische Psychologie.* doi: <https://doi.org/10.1024/1010-0652/a000344>
- Fornell, C. and Larcker, D.F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error[J]. *Journal of Marketing Research, 18*, 39-50. [10.1177/002224378101800104](https://doi.org/10.1177/002224378101800104).
- García-Martínez, I., Augusto-Landa, J.M., Quijano-López, R. and León, S. P. (2022). Self-Concept As A Mediator of the Relation Between University Students' Resilience and Academic Achievement. *Frontiers in Psychology, 12*, 747168. doi: <https://doi.org/10.3389/fpsyg.2021.747168>
- Gorges, J. and Weidner, E.M. (2023). Motivation Toward Novel Learning Content: Testing the Predictive Validity of School-Based Motivation. *the Journal of Experimental Education, 91*(1), 186-204. doi: <https://doi.org/10.1080/00220973.2021.1897775>
- Havia, J., Lutovac, S. and Kaasila, R. (2024). Preservice Subject Teachers' Beliefs About Teacher Subject Interest: Love For A Subject As A Resource and A Challenge. *European Journal of Teacher Education, 1-18.* doi: <https://doi.org/10.1080/02619768.2024.2440714>
- Havia, J., Lutovac, S., Komulainen, T. and Kaasila, R. (2023). Preservice Subject Teachers' Lack of Interest in Their Minor Subject: Is It A Problem?. *International Journal of Science and Mathematics Education, 21*(3), 923-941. doi: <https://doi.org/10.1007/s10763-022-10277-3>
- Hendriks, P. (1999). Why Share Knowledge? the Influence of Ict on the Motivation For Knowledge Sharing. *Knowledge and Process Management, 6*(2), 91-100. doi: [https://doi.org/10.1002/\(SICI\)1099-1441\(199906\)6:2<91::AID-KPM54>3.0.CO;2-M](https://doi.org/10.1002/(SICI)1099-1441(199906)6:2<91::AID-KPM54>3.0.CO;2-M)
- Huang, C. (2012). Discriminant and Incremental Validity of Self-Concept and Academic Self-Efficacy: A Meta-Analysis. *Educational Psychology, 32*(6), 777-805. doi: <https://doi.org/10.1080/01443410.2012.732386>
- Huang, M.C., Chiu, Y.P. and Lu, T.C. (2013). Knowledge Governance Mechanisms and Repatriate's Knowledge Sharing: the Mediating Roles of Motivation and Opportunity. *Journal of knowledge management, 17*(5), 677-694. doi: <https://doi.org/10.1108/JKM-01-2013-0048>
- Huang, X., Lin, C.H., Sun, M. and Xu, P. (2022). Metacognitive Skills and Self-Regulated Learning and Teaching Among Primary School Teachers: the Mediating Effect of Enthusiasm. *Metacognition and Learning, 17*(3), 897-919. doi: <https://doi.org/10.1007/s11409-022-09297-9>
- Hair Jr., J.F. (2019). *Multivariate Data Analysis* (Eighth Edition), Cengage Learning, EMEA.
- Kirsten, K., Greefrath, G. and Geisler, S. (2025). Development of Interest in Mathematics and Mathematical Self-Concept At the Transition From School To University and Its Relation To Study Success. *Educational Studies in Mathematics, 1-23.* doi: <https://doi.org/10.1007/s10649-025-10469-y>

- Kittel, A.F.D. and Seufert, T. (2023). It's All Metacognitive: the Relationship Between Informal Learning and Self-Regulated Learning in the Workplace. *PloSone*, 18(5), e0286065. doi: <https://doi.org/10.1371/journal.pone.0286065>
- Kunter, M., Frenzel, A., Nagy, G., Baumert, J. and Pekrun, R. (2011). Teacher Enthusiasm: Dimensionality and Context Specificity. *Contemporary Educational Psychology*, 36(4), 289-301. doi: <https://doi.org/10.1016/j.cedpsych.2011.07.001>
- Li, G., Yang, Y., Guo, L., Zhao, G. and Cui, S. (2025). Ideality and Reality Collision: How Perceived Professional Environment Shapes Chinese Medical Undergraduates' Subject Interest. *BMC Medical Education*, 25(1), 1-12. doi: <https://doi.org/10.1186/s12909-025-07952-8>
- Lin, H.F. (2007). Knowledge Sharing and Firm Innovation Capability: An Empirical Study. *International Journal of Manpower*, 28(3/4), 315-332. doi: <https://doi.org/10.1108/01437720710755272>
- Lohbeck, A. and Frenzel, A.C. (2022). Latent Motivation Profiles For Choosing Teaching As A Career: How Are They Linked To Self-Concept Concerning Teaching Subjects and Emotions During Teacher Education Training?. *British Journal of Educational Psychology*, 92(1), 37-58. doi: <https://doi.org/10.1111/bjep.12437>
- Lotz, C., Hawlitschek, P. and Deiglmayr, A. (2025). From Aspiration To Passion—Investigating the Role of Career Choice Motivation and Self-Concept For Teacher Enthusiasm in Early Stages of Teacher Education. *Teaching and Teacher Education*, 165, 105102. <https://doi.org/10.1016/j.tate.2025.105102>
- Meyer, D., Doll, J. and Kaiser, G. (2025). The Professional Identity of Pre-Service Primary School Teachers in the Bachelor's Programme. *Longitudinal Analyses of Changes and Correlations With Student Characteristics. Zeitschrift Fur Erziehungswissenschaft*. doi: <https://doi.org/10.1007/s11618-025-01300-8>
- Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organization science*, 5(1), 14-37. <https://doi.org/10.1287/orsc.5.1.14>
- Oberhauser, L. and Hertel, S. (2023). Choosing Connection: Relational Values As A Career Choice Motivation Predict Teachers' Relational Goal Setting. *Frontiers in Psychology*, 14, 1147276. doi: <https://doi.org/10.3389/fpsyg.2023.1147276>
- Panadero, E. (2017). A Review of Self-Regulated Learning: Six Models and Four Directions For Research. *Frontiers in Psychology*, 8, 422. doi: <https://doi.org/10.3389/fpsyg.2017.00422>
- Pintrich, P.R. and De Groot, E.V. (1990). Motivational and Self-Regulated Learning Components of Classroom Academic Performance. *Journal of Educational Psychology*, 82(1), 33. doi: <https://doi.org/10.1037/0022-0663.82.1.33>
- Pohlmann, B. and Möller, J. (2010). Fragebogen zur Erfassung der Motivation für die Wahl des Lehramtsstudiums (FEMOLA) 1Dieser Beitrag wurde unter der Herausgeberschaft von D. Leutner und DH Rost bearbeitet. *Zeitschrift für pädagogische Psychologie*. doi: 10.1024/1010-0652/a000005
- Quinlan, K.M. and Renninger, K.A. (2022). Rethinking Employability: How Students Build on Interest in A Subject To Plan A Career. *Higher Education*, 84(4), 863-883. doi: <https://doi.org/10.1007/s10734-021-00804-6>
- Retelsdorf, J., Bauer, J., Gebauer, S.K., Kauper, T. and Möller, J. (2014). Erfassung Berufsbezogener Selbstkonzepte von Angehenden Lehrkräften (ERBSE-L). *Diagnostica*. doi: <https://doi.org/10.1026/0012-1924/a000108>
- Rost, D.H. and Feng, X. (2024). Academic Self-Concept Wins the Race: the Prediction of Achievements in Three Major School Subjects By Five Subject-Specific Self-Related Variables. *Behavioral Sciences*, 14(1), 40. doi: <https://doi.org/10.3390/bs14010040>
- Ryan, R.M. and Deci, E.L. (2020). Intrinsic and Extrinsic Motivation From A Self-Determination Theory Perspective: Definitions, Theory, Practices, and Future Directions. *Contemporary Educational Psychology*, 61, 101860. doi: <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Schmidt, I., Brunner, M. and Preckel, F. (2018). Effects of Achievement Differences For Internal/External Frame of Reference Model Investigations: A Test of Robustness of Findings Over Diverse Student Samples. *British Journal of Educational Psychology*, 88(4), 513-528. doi: <https://doi.org/10.1111/bjep.12198>
- Schneider, R. and Wolff, F. (2023). The Formation of Subject-Specific Values As A Two-Step Process: Self-Concepts Mediate the Relation Between Achievement and Values. *Contemporary Educational Psychology*, 75, 102223. doi: <https://doi.org/10.1016/j.cedpsych.2023.102223>

- Schroeders, U. and Jansen, M. (2022). Science Self-Concept—More Than the Sum of Its Parts?. *the Journal of Experimental Education*, 90(2), 435-451. doi: <https://doi.org/10.1080/00220973.2020.1740967>
- Schurtz, I. M., Pfof, M., Nagengast, B. and Artelt, C. (2014). Impact of Social and Dimensional Comparisons on Student's Mathematical and English Subject-Interest At the Beginning of Secondary School. *Learning and Instruction*, 34, 32-41. doi: <http://dx.doi.org/10.1016/j.learninstruc.2014.08.001>
- Schwinger, M. (2013). Structure of Academic Self-Handicapping—Global Or Domain-Specific Construct? *Learning and Individual Differences*, 27, 134-143. doi: <http://dx.doi.org/10.1016/j.lindif.2013.07.009>
- Sheldrake, R. (2016). Confidence as Motivational Expressions of Interest, Utility, and Other Influences: Exploring Under-Confidence and Over-Confidence in Science Students At Secondary School. *International Journal of Educational Research*, 76, 50-65. doi: <http://dx.doi.org/10.1016/j.ijer.2015.12.001>
- Skatova, A. and Ferguson, E. (2014). Why do Different People Choose Different University Degrees? Motivation and the Choice of Degree. *Frontiers in Psychology*, 5, 1244. doi: <https://doi.org/10.3389/fpsyg.2014.01244>
- Tosto, M.G., Asbury, K., Mazzocco, M.M., Petrill, S. A. and Kovas, Y. (2016). From Classroom Environment To Mathematics Achievement: the Mediating Role of Self-Perceived Ability and Subject Interest. *Learning and Individual Differences*, 50, 260-269. doi: <http://dx.doi.org/10.1016/j.lindif.2016.07.009>
- Weinhandl, R., Mayerhofer, M., Grosse, C.S. and Helm, C. (2025). Unlocking the Secrets of Mathematics Performance. *Research in Mathematics*, 12(1), 2450862. doi: <https://doi.org/10.1080/27684830.2025.2450862>
- Wild, S. and Grassinger, R. (2023). The Importance of Perceived Quality of Instruction, Achievement Motivation and Difficulties in Self-Regulation For Students Who Drop Out of University. *British Journal of Educational Psychology*, 93(3), 758-772. doi: <https://doi.org/10.1111/bjep.12590>
- Wild, S. and Kunina-Habenicht, O. (2025). Development of Students' Subject Interest At University: Analysis of Students' Predictors and Lecturers' Attitudes Towards the Characteristics of A Successful University. *European Journal of Psychology of Education*, 40(1), 16. doi: <https://doi.org/10.1007/s10212-024-00913-7>
- Wild, S., Rahn, S. and Meyer, T. (2024). Interest and Its Associations With University Entrance Grades, Lecturers' Perceived Support, and Student Dropout. *International Journal for Educational and Vocational Guidance*, 1-19. doi: <https://doi.org/10.1007/s10775-024-09684-5>
- Xu, J. (2018). Reciprocal Effects of Homework Self-Concept, Interest, Effort, and Math Achievement. *Contemporary Educational Psychology*, 55, 42-52. doi: <https://doi.org/10.1016/j.cedpsych.2018.09.002>
- Yaman, M., Nerdel, C. and Bayrhuber, H. (2008). The Effects of Instructional Support and Learner Interests When Learning Using Computer Simulations. *Computers & Education*, 51(4), 1784-1794. doi: <https://doi.org/10.1016/j.compedu.2008.05.009>
- Zimmerman, B.J. (2013). From Cognitive Modeling To Self-Regulation: A Social Cognitive Career Path. *Educational Psychologist*, 48(3), 135-147. doi: <https://doi.org/10.1080/00461520.2013.794676>

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