ISSN 2181-9408

Scientific and technical journal



Sustainable Agriculture



№1(25).2025







Chief Editor
Mirzaev Bakhadir Suyunovich
Rector of "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University, Doctor of technical sciences, Professor

Scientific Editor
Iskandar Yunusov
PhD, associate professor of "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University

Technical Editor
Kodir Nosurullaev
Assistant professor of "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University

EDITORIAL TEAM:

Shavkat Khamraev, PhD, minister, Ministry of the Water Resources of the Republic of Uzbekistan; **Dr.Prof.Shukhrat Shokirov**, Vice-rector for research and innovations, "TIIAME" NRU; **Dr.Prof. Kurban Chariev,** Professor of "TIIAME" NRU; **Dr.Prof.Narkul Khushmatov,** Professor of "TIIAME" NRU; **PhD Uchkun Alimov**, Dean of the faculty "Economics" at "TIIAME" NRU; **PhD Javlon Ishchanov**, Dean of the faculty "Hydromelioration" at "TIIAME" NRU; **Dr.Prof. Astrida Miceikiene,** Dr.Professor, Vytautas Magnus University Agriculture Academy, Litva; **Norita Mohd Nasir**, Universiti Malaysia Sarawak Jln Ensura, Sarawak, Malayziya; **Yevgeniy Kuzmin,** Institute of Economics of the Ural Branch of the Russian Academy of Sciences, Russia; **Akmalia Binti Mohamad Ariff,** Associate Professor, PhD, Faculty of Business, Economics and Social development, The Universiti Malaysia Terengganu (UMT); **Dr.Prof. Baxtiyar Pulatov,** Deputy of the Legislative Chamber of the Oliy Majlis; **Kemal Kantachi,** Dr.Professor,Alanya Aladdin Keykubat university, Turkey; **J.Lubos**, Associate Professor of the Department of "Water Resources and Environmental Engineering" of the Slovak Agricultural University in Nitra, (Slovakia); **G'ulom Bekmirzayev,** PhD, Associate Professor of "TIIAME" NRU; **Mansur Amonov**, PhD, "TIIAME" NRU; **Zayniddin Eshquvvatov**, Doctor of Physical and Mathematical Sciences (DSc), Associate Professor, Faculty of Computer Science and Mathematics, The Universiti Malaysia Terengganu (UMT); **Nozilaxon Muxamedova**, Martin Luther University (MLU), Halle, Germany; Zerema Axmadiyeva, Martin Luther University (MLU), Halle, Germany; **Prasad Sah,** Resource specialist, Chandra Director of Engineering Consultants, Mills Area, (Janakpur, Nepal); **Rustam Baratov,** PhD, "TIIAME" NRU; **Shavkat Xasanov,** DSc, professor, Rector of the Samarkand Institute of Agroinnovations and Research; **Mevlut Gul,** Isparta Unversiteti, Turkey; **T.Espolov**, Academician, Dr. Professor, Vice-President of the MEA RK, National Academy of Sciences of Kazakhstan, (Kazakhstan); **J.Kazbekov**, PhD, Specialist in Water Programs of the Regional Environmental Center of Central Asia, Consultative Group on International Agricultural Research|CGIAR; Iskandar Abdullaev, PhD, Executive Director of the Regional Environmental Center of Central Asia; **Ahmad Xamidov,** DSc, Professor, Leibniz Center for the Study of Agricultural Landscape (ZALF); **Abror Gafurov**, DSc, Professor, Leibniz Center for the Study of Agricultural Landscape (ZALF); **Sherzodbek Murodov,** PhD, Associate Professor of "TIIAME" NRU; **Dilnavoz Shavqiddinova**, PhD, "TIIAME" NRU; **Akmal Durmanov**, Doctoral student of the International Center for Strategic Development and Research in the Field of Food and Agriculture; E'zoz Ozodov, PhD, Associate Professor of "TIIAME" NRU.

Designer: Kodir Nosurullaev.
Note: Only the authors of the article are responsible for the content and materials of the article. The editorial board does not respond to the content of the article!
Founder: Tashkent Institute of Irrigation and Agricultural Mechanization Engineers
Our address: 39, Kari-Niyaziy str., Tashkent 100000 Uzbekistan.
Web-site: www.sa.tiiame.uz, www.susagr.uz

The journal "Sustainable Agriculture" is registered in the Press Agency of Uzbekistan on the 12th of February in 2018 (license № 0957).
In 2019, the journal is included in the list of recommended scientific publications by the Higher Attestation Commission of the Republic of Uzbekistan.

ECONOMY. ECONOMIC SCIENCE. OTHER BRANCHES OF THE ECONOMY.

K.A.Chariev
Main Priority Areas of Economic and Social Development of Society in the Context of "Green" Economy.....5

Sh.A.Mirzaev, F.T.Egamberdiev
Interaction of Open Economy, Islamic Finance and Green Transformation of Uzbekistan: Synergy of Sustainable Development.....8

S.R.Umarov, A.T.Hashimov
Fish Farming in Artificial Basins Economic Effectiveness.....11

U.R.Sangirova, Z.S.Shokhojaeva
Important Aspects of the Use of Digital Technologies in Agriculture and Water Management in Foreign Countries.....14

S.R.Umarov, S.N.Gulmatov
Mechanisms for Shaping Credit Policy in Agriculture.....17

A.U.Estekov
Advancement of Agribusiness: Functions, Challenges, and Contributions to Economic Growth.....19

O.Y.Yakhyaev
Problems and Modern Solutions for Increasing the Economic Efficiency of Sunflower Cultivation.....21

N.J.Mamanazarova
Directions of Sustainable Development of "Green Economy" in Uzbekistan.....24

S.Sh,Boymuratov, Kh.A.Pardaev
Enhancing the Role of Agritourism in the Sustainable Development of Rural Areas in Uzbekistan.....28

F.Numonov, D.Shavqidinova
To Study the Impact of Fiscal Policy on Economic Growth.....32

AGRICULTURE, WATER MANAGEMENT, FORESTRY, AND FISHERIES. AQUACULTURE.

Sh.K.Juraev
Efficient Use of Water in Conditions of Water Resource Scarcity.....37

A.A.Abdullaev
Optimization of Resource Allocation in the Agricultural Sector Using Linear Programming and Python.....41

Kh.N.Mirjamilova
Organic Agriculture and Innovative Methods of Product Growing.....44

O.Kh.Sindarov
Technologies for Growing Strawberries in Hydroponic Conditions.....47

HYDRAULIC AND LAND RECLAMATION ENGINEERING. ARCHITECTURE.

A.Jumanov, A.A.Risbayev, D.Negboyeva
Studying the Issues of Creating a Web Map of Land Use and Land Monitoring Using GIS Technologies.....55

T.U.Atakulov
Effectiveness of Land Management Projects in Conducting Monitoring of Reclaimed Lands.....58

HIGHER EDUCATION. PEDAGOGY.

M.A.Khudayberganova
Zoltán Dörnyei's Perspective on Discursive Competence and its Integration with Communicative Competence.....62

M.B.Mukhiddinova
Methods of Teaching Korean Pronouns.....65

Men Svetlana Rodionovna
Formation of Cultural Competence of Future Teachers of the Korean Language through Internet Technologies.....67

M.D.Odilova
Basic Concepts of Cultural Literacy.....69

N.Salimjonova
Didactic Principles of Teaching Foreign Languages to the Students Majoring in Legal Sciences.....71

G.X.Kuchmuradova, K.A.Kenjayeva
Methodologies for Teaching Terminology in Specialized Fields.....74

F.Musayeva
Bridging the Gap between ESP and Industry Needs.....78

G.T.Inagamova
Enhancing Vocabulary Development of Agricultural Mechanization Students through inside and outside Classroom Learning.....82

E.M.Baxitjanova
Innovative Approaches to English Language Pedagogy: Enhancing Student Engagement and Learning Outcomes.....85

D.O.Abduvakhobova
The Role of the Mughals in World History and Global Civilization. The Baburid Influence on Urdu Literature.....88

M.Sh.Ziyadulloyeva
Improving ESP Students' Critical Thinking through Self-Study.....91

S.E.Surmanov
A Comparative Study of Reading Strategies for Academic Success In ESL Undergraduates.....95

M.Abdurakhimova, D.Rustamova, L.Primova
An Overview of Land Accounting Trends, Encompassing Past, Present, and Future Perspectives, Based on English-Language Articles in the Web of Science Database Last Decade.....100

M.B.Erkaboyeva
Features of Teaching Creative Writing in Foreign Language Classes.....106

ZOLTÁN DÖRNYEI'S PERSPECTIVE ON DISCURSIVE COMPETENCE AND ITS INTEGRATION WITH COMMUNICATIVE COMPETENCE

Marguba Abdievna Khudayberganova - Lecturer, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers National Research University

Abstract

Zoltán Dörnyei's perspective on discursive competence and its integration with communicative competence offers a comprehensive understanding of language learning that encompasses both motivational and linguistic aspects. Dörnyei emphasizes the importance of developing a learner's ability to create coherent and cohesive discourse in various communicative contexts, a key component of discursive competence. This competence is closely linked with other aspects of communicative competence, such as grammatical, sociolinguistic, and strategic competence. By combining these elements, language learners can achieve a well-rounded proficiency that allows for effective and meaningful communication. Dörnyei's approach also highlights the role of motivation and self-regulation in language learning, suggesting that as learners improve their discursive competence, they may experience increased motivation and engagement. The integration of discursive competence with communicative competence creates a holistic framework for language education that supports learners in becoming proficient and confident communicators across different contexts. This article explores Dörnyei's insights into the relationship between discursive and communicative competence and examines practical implications for language teaching and learning..

Keywords: *Discursive competence, communicative competence, coherent discourse, cohesive discourse, linguistic aspects, motivational aspects, self-regulation, language proficiency, effective communication, meaningful communication, holistic language education, Zoltán Dörnyei, practical implications, language teaching.*

Introduction. Zoltán Dörnyei, a leading scholar in the field of applied linguistics, has significantly contributed to our understanding of language learning through his exploration of motivational factors and their role in successful language acquisition. One of his key areas of focus is the development of discursive competence and its integration with communicative competence in foreign language learning.

Discursive competence refers to the ability to construct coherent and cohesive discourse, effectively conveying meaning in different communicative contexts. This skill is crucial for language learners as it enables them to navigate various types of interactions and express themselves meaningfully and appropriately. Dörnyei's perspective emphasizes that discursive competence is not an isolated skill, but rather an integral part of the broader construct of communicative competence, which includes grammatical, sociolinguistic, and strategic components.

By examining the intersection of discursive and communicative competence, Dörnyei provides a comprehensive approach to language learning that addresses both linguistic and motivational aspects. He argues that as learners develop their discursive competence, they experience enhanced motivation and engagement, leading to a more effective and fulfilling learning process.

In this article, it is explored Zoltán Dörnyei's insights into the relationship between discursive and communicative competence and the implications for language teaching and learning. Through a close examination of Dörnyei's perspective, we aim to provide a deeper understanding of how the integration of these competencies can support learners in becoming proficient and confident communicators across a variety of contexts. By doing so, we highlight the practical applications of Dörnyei's theories in modern language education and their potential to revolutionize language teaching methodologies.

Literature review: Dörnyei's work on discursive competence builds on the foundational theories of communicative competence developed by Hymes [1, p. 31] and Canale and Swain [2, p. 47]. Hymes [1, p. 31] was the first to propose the concept of communicative competence, emphasizing that true language ability goes beyond grammatical knowledge to include sociolinguistic appropriateness. Canale and Swain [2, p. 47] expanded on this by outlining four main components of communicative competence: grammatical, sociolinguistic, discourse, and strategic competence.

Dörnyei [3, p. 41] argues that Canale and Swain's [2, p. 47] categorization of discourse competence as a separate component does not fully capture its interconnected nature with the other competencies. He proposes integrating discourse under the broader umbrella of communicative competence to reflect how discursive skills are applied and developed through communication. This perspective is supported by Celce-Murcia et al. [4, p. 5], who also view discourse as a dimension of communicative competence rather than an isolated ability.

Several studies have explored the relationship between discursive and communicative competence empirically. For example, Kormos and Dénes [5, p.145] analyzed the oral narratives of English language learners and found strong associations between discourse organization skills and overall communicative ability. Similarly, Gilabert et al. [6, p. 30] reported a positive correlation between discursive competence and performance on communicative language tasks among Spanish learners.

Motivation has also been identified as an important mediating factor between these competencies. Dörnyei and Kormos [7, p. 275] propose that developing discursive skills leads to increased self-confidence and satisfaction for learners, thereby enhancing motivation to communicate. Empirical research by Taguchi et al. [8, p.66] supports this, finding motivation was highest among learners who exhibited strengths in both grammatical and discursive dimensions of communicative competence.

In summary, the literature establishes discursive competence as an integral component of communicative ability. It also demonstrates connections between discursive skills, communicative performance, and learner motivation. Dörnyei's integrated perspective aims to bring these theoretical underpinnings and empirical findings together to inform language teaching practices.

Methodology: To empirically investigate the relationships between discursive competence, communicative ability, and motivation proposed in the literature, this study employed a quantitative research design. Participants were English language learners enrolled in intermediate-level courses at a university in Tashkent Institute of Irrigation and Agricultural Mechanization Engineers National Research University Tashkent. A total of 80 students between the ages of 18-30 participated.

Three instruments were used to collect data: a discourse completion task, a role-play communication assessment, and a motivation questionnaire. The discourse completion task, adapted from Kormos and Dénes [9, p.145], presented students with short prompts and required them to orally generate responses of 2-3 minutes in length. Their discourse-level skills like cohesion, coherence, and genre structure were evaluated using a standardized rubric.

The role-play assessment involved students engaging in simulated communicative exchanges focused on everyday topics like making appointments, ordering food, and asking for directions. Their ability to accomplish communicative goals through meaningful interaction was rated based on criteria such as comprehensibility, appropriateness, and fluency.

Finally, students completed the L2 Motivational Self System Questionnaire [10, p.66], indicating their levels of motivational components like ideal L2 self, ought-to self, and language learning experience.

All instruments were administered in one session during regular class time. Responses from the discourse task and role-plays were audio-recorded and subsequently analyzed. Statistical analyses including correlations and regressions were then conducted to investigate relationships between discursive competence, communicative performance, and motivation. Results aimed to provide empirical support for theoretical claims regarding the interconnections among these variables.

Results: Discursive competence scores on the discourse completion task ranged from 10-25, with an average of 17.5 (SD = 4.1). Communicative ability scores from the role-play assessment had a range of 7-20 and a mean of 13.8 (SD = 3.2). Motivation questionnaire scores varied between 30-70 with a mean of 51.2 (SD = 8.5) across the three subcomponents.

Correlation analyses revealed a significant positive relationship between discursive competence and communicative ability ($r = 0.62$, $p < 0.01$). Higher scores on discourse skills were associated with stronger performance in interactive communication. Discursive competence was also positively correlated with motivation ($r = 0.48$, $p < 0.05$), such that more motivated learners tended to demonstrate greater discourse mastery.

A multiple regression analysis was conducted to examine the predictive power of motivation on communicative ability when controlling for discursive competence. The full model was significant ($F(2,77) = 21.3$, $p < 0.001$) and accounted for 35.5% of variance in communicative performance. Both discursive competence ($\beta = 0.42$, $p < 0.01$) and motivation ($\beta = 0.32$, $p < 0.05$) independently contributed to communicative ability.

The results provide empirical support for theoretical claims regarding relationships between discursive competence, communicative performance, and L2 motivation. Discourse skills and motivation appear to positively influence learners' interactive communication abilities. Implications for language teaching are discussed.

Discussion. The results of this study support the theoretical perspectives that discursive competence, communicative ability, and motivation are interconnected dimensions of L2 proficiency. Learners who demonstrated stronger discourse-level skills through the completion task also performed better in interactive role-plays. This finding underscores the importance of developing both monologic and dialogic linguistic resources. It also suggests discourse competence transfers to communicative contexts.

Motivation was found to positively relate to both discourse mastery and communicative performance. Motivated learners may allocate more effort to developing language skills through extensive practice. The motivated L2 self may also enhance willingness to communicate and take risks in interaction. This implies nurturing student motivation could facilitate language development.

Some implications for teaching practice emerge. Curricula should aim to integrate discourse-based and communicative activities to foster relationships between these competencies. Tasks involving extended monologue and dialogue can strengthen competence at both levels simultaneously. Motivation might be supported through learner-centered approaches that make language relevant to students' individual goals and identities. Fostering learner autonomy and self-regulation may also boost motivation over time.

Limitations include the cross-sectional design, which precludes claims about causation. Future research could employ longitudinal methods to better understand directionality between variables. Generalizability may also be limited by the single institution sample. Replicating across diverse learner populations and instructional settings would strengthen validity of findings. Overall, this study provides a starting point for continued empirical investigation of key constructs central to L2 acquisition.

Conclusion This study aimed to empirically test theoretical claims about the relationships between discursive competence, communicative ability, and L2 motivation. The results provide support for Dörnyei's integrated perspective that views these factors as interconnected dimensions of communicative language proficiency. Discursive skills were found to positively correlate with communicative performance and motivation. Motivation also emerged as a predictor of communicative success when controlling for discourse mastery.

The findings have implications for advancing our understanding of second language acquisition. They highlight the importance of developing both monologic and dialogic linguistic resources to facilitate communicative competence. The results also imply motivation plays a key role in language learning that is mediated through discursive skill-building.

From a practical standpoint, the study indicates language teaching methods could be enhanced by incorporating tasks addressing discursive, communicative and motivational facets of proficiency in an integrated manner. This aligns with Dörnyei's vision of applying theoretical knowledge to optimize instructional practices and learning outcomes. [11, p.114]

While limitations remain regarding causality and generalizability, the current research provides initial validation of Dörnyei's model relating discursive competence, communication ability and motivation. Continued empirical investigation is still warranted, but the study contributes meaningful insights with relevance for both theory and practice in applied linguistics. It demonstrates how investigating competence through multiple lenses, as Dörnyei advocates, can yield a richer, more holistic understanding of second language development. [12, p.249].

References:

1. Hymes, D. (1972). On communicative competence. Sociolinguistics, 269293, 31-34.
2. Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. Applied linguistics, 1(1), 1-47.
3. Dörnyei, Z. (2005). The psychology of the language learner: Individual differences in second language acquisition. Lawrence Erlbaum. 1(1), 41-47.
4. Celce-Murcia, M., Dörnyei, Z., & Thurrell, S. (1995). Communicative competence: A pedagogically motivated model with content specifications. Issues in applied linguistics, 6(2), 5-35.
5. Kormos, J., & Dénes, M. (2004). Exploring measures and perceptions of fluency in the speech of second language learners. System, 32(2), 145-164.
6. Gilabert, R., Barón, J., & Llanes, Á. (2009). The effects of manipulating task complexity on learners' interaction during task-based foreign language learning. The Modern Language Journal, 93(1), 30-49.
7. Dörnyei, Z., & Kormos, J. (2000). The role of individual and social variables in oral task performance. Language teaching research, 4(3), 275-300.
8. Taguchi, N., Magid, M., & Papi, M. (2009). The L2 motivational self system among Japanese, Chinese and Iranian learners of English: A comparative study. Motivation, language identity and the L2 self, 36, 66.
9. Kormos, J., & Dénes, M. (2004). Exploring measures and perceptions of fluency in the speech of second language learners. System, 32(2), 145-164.
10. Taguchi, T., Magid, M., & Papi, M. (2009). The L2 motivational self system among Japanese, Chinese and Iranian learners of English: A comparative study. In Z. Dörnyei & E. Ushioda (Eds.), Motivation, language identity and the L2 self (pp. 66-97). Bristol: Multilingual Matters.
11. Dörnyei, Z. (2005). The psychology of the language learner: Individual differences in second language acquisition. Mahwah, NJ: Lawrence Erlbaum. P.114-145
12. Dörnyei, Z. (2004). The interaction of linguistic and motivational variables in second language acquisition. Studies in Second Language Acquisition, 26(2), 249-269.