From the Mushfake identity to the enrichment of the student teacher identity

Afsaneh. Azizi Alavijeh[1]*, Mohammadreza. Emamjomeh[2], Mahmoud. Mehrmohammadi[3], Alireza. Assareh[4],
Gholamali. Ahmadi[2]

[1] Doctoral Student of Curriculum Planning, Shahid Rajaee Teacher Training University, Tehran, Iran
[2] Associate Professor of Department of Humanities, Shahid Rajaee Teacher Training University, Tehran, Iran
[3] Professor of Department of Humanities, Tarbiat Modares University, Tehran, Iran
[4] Professor of Department of Humanities, Shahid Rajaee Teacher Training University, Tehran, Iran

* Corresponding author email address: afsanehazizi67@gmail.com

Article Info

Article type:
Original Research

How to cite this article:

ABSTRACT

Considering the importance of the student teacher's identity as an important matter in self-knowledge and enriching it in the direction of his professional growth, the present study tries to introduce the pioneer identity of the student teacher, inspired by the Mushfake theory, which is a novel concept. Therefore, an attempt was made to give meaning to Mushfake identity with existing theoretical sources and textual synthesis and data coding, then its four dimensions were determined, and finally, with the method of observational inquiry, it was developed and expanded its important and abandoned ideas and why the recognition of this Identity should be examined by conceptualizing its characteristics. For the validity of the data, re-coding of the findings was done by another evaluator and Cohen's kappa coefficient formula was used to confirm, and the agreement between the evaluators was 0.83.The results show that the Mushfake identity from one dimension is similar to a performance that defines the way to join the profession and by Mushfaking lived conditions from the experiences of successful teachers and professors, classmates, content knowledge and numerous discourses; The primary identity of being a teacher is experienced; But on the other hand, by recognizing the positive and negative aspects of Mushfaked identity and using the important elements of ownership, creating a sense of ownership and agency, one can gradually distance oneself from Mushfake identity and with the help of tools of cognition, metacognition, and reflection on non-stationarity. Passing this stage and with the help of recognizing its main characteristics, he moved towards his professional development.

Keywords: *Teacher's identity, mushfake identity, discourse, professional identity, four dimensions of mushfake identity.*

Introduction

When researchers study the concept of identity, they think about the nature and existence of humans, what characteristics people have in terms of personality, values and vision, and how they are related to the contexts in which they are involved. They mean, it makes itself (Lindsay, 2011). That is, when they ask me: Who are you? In response, I may say: I am Iranian, I am Muslim, I am a teacher, etc. (Rahdar, 2011). This definition means that in addition to the fact that identity refers to the recognition of individual characteristics, from McLure's point of view it is also referred to as an organizing element in professional life. This recognition is doubled for the teacher, since it is the field of character development and cultivation of people who seek to imitate his character in order to build their own identity and knowledge. In order to clarify and make teachers aware of their profession and identity, it is better to make the path more clear for them in the first steps of entering this profession, because the initial stage of student teachers' knowledge is to be a teacher in any direction of the teacher's profession (teaching) it is considered a difficult stage (Luft & Patterson, 2002). This lack of awareness of self-recognition in a professional situation is assumed as a difficult stage Therefore, one of the efforts that can be made in the field of such researches is to investigate the dynamic formation of student teachers' identity upon entering this field and accepting the teacher's identity.that according to Purwaningsih, Suryadi, Munfaridah (2020) student teachers in the early stages of entering this profession should develop their identity as teachers. Why are the students of this profession still not recognized as teachers because Becoming a teacher is a complex process that many pre-service teachers imagine first (Beattie, 2000; Britzman, 2003; Zivkovic, 2007). With these words, it can be said that most of the students in the first stage of university education; They don't have the identity of a teacher, and their identity is placed between a halo of being recognized as a student and a teacher. So the question arises, who is recognized as a teacher? "Actually, which student is referred to as a student-teacher or a teacher?" Therefore, what the researcher seeks to answer in this article is how to give meaning to the beginning of the identity of the teacher's profession (Mushfake identity) and, quoting Beauchamp and Thomas(2006), to label this meaning to a person who is supposed to be active in this profession, or from Rorty's point of view. Enrichment is part of the final word of the teacher's identity from the student-teacher's point of view; Where does this identity get its meaning and according to that, how can we help the development and dynamism of the identity of the teacher's profession. Based on this, since the borrowed identity in the teacher's profession is a novel concept and so far, the pioneer identity of the student teacher has not been addressed in researches, the researcher tried to look at this meaning from Paul Gee's point of view, inspired by Mushfak's theory. Therefore, in this research, an attempt is made to first introduce and give meaning to the Mushfaked identity, then to specify the four dimensions for it, and finally to examine the path of passing through this identity by specifying its characteristics, and to answer to questions: What does a mushfaked identity mean and how is it formed? What are the dimensions of mushfaked identity? Why should student teachers mushfake identity cards? What are the important features of the mushfaked identity that illuminates the context of moving towards professional development?

Methodology

The current research is based on a mixed research method that includes all scientific research articles from available sources that refer to the Mushfake discourse from 1989 (Mushfake definition) to 2023 and has been used to analyze Roberts' six-stage model. Then, the data obtained from the analysis was examined by another researcher and the Kappa agreement rate by spss software was declared to be about 0.83.Then, using analytical-interpretive method, the meaning of Mushfake from the following codes was conceptualized and its relationship with student teacher identity was analyzed by analytical method.Since the purpose of the research is to understand the concept of Mushfake identity and to know its dimensions and it is explained based on theoretical foundations, therefore, by using the work identity which is very similar to the Mushfake identity, the researcher uses interpretive analytical method and text analysis of existing documents to this The dimensions are achieved.

Findings

At the beginning of entering the field of teacher training, the new teacher does not yet fully understand the identity of the teacher, but he knows that in the future this profession is going to be mixed with his personal identity, which means that sometimes the identity is constructed in such a way It is compatible with our idea of our future without having sufficient

knowledge about it.In other words, we play the character we want to be (Wilson ans Rennie, 2019). Gee introduces this state as Mushfake (Gee, 1990). Mushfake means creating basic conditions for oneself as a member of that society; To be kind means to live on loan, to be a loan, to look at the loan as an identity. which is formed by Mushfakeing our features and characteristics from other people of the same society. With the help of a Mushfakeing identity that brings us to role-playing, it can be like a show. It consists of two components. The first part is a teacher who has proven to be proficient in his work and knows how to do his work, and the second part is a student teacher who tries to do his work by borrowing from the teacher.Since the student teacher has not yet fully learned the teacher's professional discourse, he can guide the path of professional identity formation by imitating and borrowing in four dimensions by completing this stage in accompanying processes towards professional growth. Regarding this combination in modeling, the following can be mentioned: Cognitive dimension,Behavioral dimension, Discourse dimension and physical dimension of the person.

Conclusion

Borrowing means reflecting the pattern of behavior and states that we have adopted, and perhaps this borrowing is not consistent with environmental conditions, individual behavior, and even our gender, because the identity of each person is based on three basic concepts, which include ownership, sense making, and agency (Beijaard & Meijer, 2017). It is that we need to cultivate these three dimensions in order to move away from the imitative point of view. Therefore, one should try to learn from borrowed models in a creative and correct way and benefit from the most important of the best ones with thought and consideration, or after examining all aspects and acting thoughtfully on one's behavior with the help of three important concepts. The differences between me and the borrowed model have been investigated, such as temperament, gender; Culture, climatic conditions, etc., paid and modified that borrowed model, or finally accepted these differences and did not accept it.

References

Addison, W. E., Best, J., & Warrington, J. D. (2006). STUDENTS'PERCEPTIONS OF COURSE DIFFICULTY AND THEIR RATINGS OF THE INSTRUCTOR. *College Student Journal*, *40*(2). https://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=01463934&asa=Y&AN=21375566&h=LaZpnVMcIJk5s%2B1mB9ccew0U2y8l6KEDyU0yLwMKy99snXsOIw1hFWHh1zukT3LZ%2FxzL2ZTJqarmzYHBLanaig%3D%3D&crl=c

Alibeygi, A. H., Barani, S., & Karami Dehkordi, M. (2019). Designing a comprehensive model for teaching quality evaluation of faculty members: the case of Razi University. *Research in Curriculum Planning*, *16*(63), 21-34. https://jsr-e.isfahan.iau.ir/article_669703.html?lang=en

Bachen, C. M., McLoughlin, M. M., & Garcia, S. S. (1999). Assessing the role of gender in college students' evaluations of faculty. *Communication Education*, *48*(3), 193-210. https://doi.org/10.1080/03634529909379169

Bar, T., Kadiyali, V., & Zussman, A. (2009). Grade Information and Grade Inflation: The Cornell Experiment. *Journal of Economic Perspectives*, *23*(3), 93-108. https://doi.org/10.1257/jep.23.3.93

Basirat, M., Motevasseli, S., Mirfarhadi, N., & Taheri, M. (2019). Dentistry Students´ Viewpoints about Evaluation of Faculty members during and at the end of Semester in 2016 [Research]. *Research in Medical Education*, *11*(1), 3-9. https://doi.org/10.29252/rme.11.1.3

Beheshtirad , R., Ghalee , A., & Galavandi , H. (2014). Investigation of the Student's Perceptions and Expectations of Educational Service Quality in Urmia University and Its Relationship with the Evaluation of Faculty Member's Performance. *Quarterly Journal of New Thoughts on Education*, *9*(4), 119-145. https://www.magiran.com/paper/1243495

Beran, T., & Violato, C. (2010). Student Ratings of Teaching Effectiveness: Student Engagement and Course Characteristics. *Canadian Journal of Higher Education*, *39*(1). https://doi.org/10.47678/cjhe.v39i1.491

Berezvai, Z., Lukáts, G. D., & Molontay, R. (2021). Can professors buy better evaluation with lenient grading? The effect of grade inflation on student evaluation of teaching. *Assessment & Evaluation in Higher Education*, *46*(5), 793-808. https://doi.org/10.1080/02602938.2020.1821866

Boysen, G. A., Kelly, T. J., Raesly, H. N., & Casner, R. W. (2014). The (mis)interpretation of teaching evaluations by college faculty and administrators. *Assessment & Evaluation in Higher Education*, *39*(6), 641-656. https://doi.org/10.1080/02602938.2013.860950

Brookhart, S. M., Guskey, T. R., Bowers, A. J., McMillan, J. H., Smith, J. K., Smith, L. F., Stevens, M. T., & Welsh, M. E. (2016). A Century of Grading Research:Meaning and Value in the Most Common Educational Measure. *Review of Educational Research*, *86*(4), 803-848. https://doi.org/10.3102/0034654316672069

Buller, J. L. (2012). *Best Practices in Faculty Evaluation: A Practical Guide for Academic Leaders*. Wiley. https://books.google.com/books?id=Wz2HGZj8K6gC

Carey, T., & Carifio, J. (2012). The Minimum Grading Controversy:Results of a Quantitative Study of Seven Years of Grading Data From an Urban High School. *Educational Researcher*, *41*(6), 201-208. https://doi.org/10.3102/0013189x12453309

Chang, K., & de Lemos Coutinho, L. (2022). Administering Homework Self-Grading for an Engineering Course. *College Teaching*, *70*(3), 387-395. https://doi.org/10.1080/87567555.2021.1957666

Chowdhury, F. (2018). Grade inflation: Causes, consequences and cure. *Journal of Education and Learning*, 7(6), 86-92. https://eric.ed.gov/?id=EJ1191199

Clayson, D. E. (2009). Student Evaluations of Teaching: Are They Related to What Students Learn?:A Meta-Analysis and Review of the Literature. *Journal of Marketing Education*, 31(1), 16-30. https://doi.org/10.1177/0273475308324086

Cunningham, S., Laundon, M., Cathcart, A., Bashar, M. A., & Nayak, R. (2023). First, do no harm: automated detection of abusive comments in student evaluation of teaching surveys. *Assessment & Evaluation in Higher Education*, 48(3), 377-389. https://doi.org/10.1080/02602938.2022.2081668

Danielson, C., & McGreal, T. L. (2000). *Teacher Evaluation to Enhance Professional Practice*. Association for Supervision and Curriculum Development. https://books.google.com/books?id=GrLEtfxBEbYC

Dargahi , H., & Mohammadzadeh , N. (2013). Faculty Member's Evaluation by Students: Valid or Invalid. *Iranian Journal of Medical Education*, 13(1), 39-48. https://www.magiran.com/paper/1109932

Ezadi, S., Alavi Langerudi, s. K., Pakmehr, H., & Tajari, M. (2015). Predict Efficacy Beliefs in Human Science Students through Quality of Teaching. *Journal of higher education curriculum studies*, 6(11), 47-70. https://www.icsajournal.ir/article_15682_bd875276d98a2e20df4f3623718f1e66.pdf

Felix, E. D., Binmoeller, C., Sharkey, J. D., Dowdy, E., Furlong, M. J., & Latham, N. (2019). The influence of different longitudinal patterns of peer victimization on psychosocial adjustment. *Journal of School Violence*, 18(4), 483-497. https://doi.org/10.1080/15388220.2018.1528552

Ganbari, S., & Soltanzadeh, V. (2018). Improving the Quality of Teaching in the Light of the Evaluation of Professors: Reflectively on Students' Perspective. *Research in Teaching*, 6(2), 15-31. https://trj.uok.ac.ir/article_60838_4836097e945ca6de5d0bc41c6f263297.pdf

Ghazi Tabatabaee, M., & Yousefi Afrashteh, M. (2023). Relationship Analysis of some of the Variables Associated with Teaching Evaluation by Students: An Application of Structural Equation Modeling. *Quarterly Journal of Research and Planning in Higher Education*, 18(2), 83-107. https://journal.irphe.ac.ir/article_702784_937551382cc48c6fbb0ad295d58ecb1c.pdf

Griffin, K. A. (2020). Institutional Barriers, Strategies, and Benefits to Increasing the Representation of Women and Men of Color in the Professoriate. In L. W. Perna (Ed.), *Higher Education: Handbook of Theory and Research: Volume 35* (pp. 277-349). Springer International Publishing. https://doi.org/10.1007/978-3-030-31365-4_4

Haghighi, M., Akbari, A., Cherabin, M., & Karimi, M. (2021). A comparative study of the educational evaluation system of faculty members in Iranian universities of medical sciences [Original research article]. *Iranian Journal of Medical Education*, 21(0), 237-246. http://ijme.mui.ac.ir/article-1-5259-en.html
http://ijme.mui.ac.ir/article-1-5259-en.pdf

Hall, R. E. (2023). Grade inflation investigation: ethical challenges to the social work academy. *Social Work Education*, 42(8), 1134-1144. https://doi.org/10.1080/02615479.2022.2063829

Hattie, J. (2008). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. routledge. https://www.taylorfrancis.com/books/mono/10.4324/9780203887332/visible-learning-john-hattie

He, J., Zheng, X., Liu, M., Du, Y., Liu, G., Cui, J., & Su, Y. (2022). Reciprocity in college teaching: a big data study based on online student evaluation of 919,750 professors. *Assessment & Evaluation in Higher Education*, 47(8), 1401-1415. https://doi.org/10.1080/02602938.2022.2067980

Herman, J., & Cook, L. (2019). Fairness in Classroom Assessment. In (pp. 243-264). https://doi.org/10.4324/9780429507533-14

Jephcote, C., Medland, E., & Lygo-Baker, S. (2021). Grade inflation versus grade improvement: Are our students getting more intelligent? *Assessment & Evaluation in Higher Education*, 46(4), 547-571. https://doi.org/10.1080/02602938.2020.1795617

Johansson, S. (2016). International large-scale assessments: what uses, what consequences? *Educational Research*, 58(2), 139-148. https://doi.org/10.1080/00131881.2016.1165559

Kaplan, D. S., Liu, X., & Kaplan, H. B. (1995). Explaining Dropout Behavior: A Longitudinal Study of Direct and Indirect Psychosocial Effects of Seventh and Eighth Grade Experiences. *Educational Research and Evaluation*, 1(3), 205-225. https://doi.org/10.1080/1380361950010301

Lakeman, R., Coutts, R., Hutchinson, M., Lee, M., Massey, D., Nasrawi, D., & Fielden, J. (2022). Appearance, insults, allegations, blame and threats: an analysis of anonymous non-constructive student evaluation of teaching in Australia. *Assessment & Evaluation in Higher Education*, 47(8), 1245-1258. https://doi.org/10.1080/02602938.2021.2012643

Landrum, R. E., & Braitman, K. A. (2008). The Effect of Decreasing Response Options on Students' Evaluation of Instruction. *College Teaching*, 56(4), 215-218. https://doi.org/10.3200/CTCH.56.4.215-218

Lastusaari, M., Laakkonen, E., & Murtonen, M. (2019). Persistence in studies in relation to learning approaches and first-year grades: a study of university chemistry students in Finland [10.1039/C8RP00244D]. *Chemistry Education Research and Practice*, 20(3), 452-467. https://doi.org/10.1039/C8RP00244D

Linse, A. R. (2017). Interpreting and using student ratings data: Guidance for faculty serving as administrators and on evaluation committees. *Studies in Educational Evaluation*, 54, 94-106. https://doi.org/10.1016/j.stueduc.2016.12.004

Maamari, B. E., & Naccache, H. S. (2022). The Impact of Grade Inflation on Teachers' Evaluation: A Quantitative Study Conducted in the Context of Five Lebanese Universities. *Journal of Global Education and Research*, 6(2), 192-205. https://eric.ed.gov/?id=EJ1347283

Mackinnon, S. P., & Kashif, S. (2022). A Short History of Grading Practices at Dalhousie University (1901-2021). *Online Submission*. https://eric.ed.gov/?id=ED620603

Marsh, H. W. (1977). The Validity of Students' Evaluations: Classroom Evaluations of Instructors Independently Nominated As Best and Worst Teachers by Graduating Seniors. *American Educational Research Journal*, 14(4), 441-447. https://doi.org/10.3102/00028312014004441

Marsh, H. W. (1982). Factors Affecting Students' Evaluations of the Same Course Taught by the Same Instructor on Different Occasions. *American Educational Research Journal*, 19(4), 485-497. https://doi.org/10.3102/00028312019004485

Marsh, H. W. (2001). Distinguishing Between Good (Useful) and Bad Workloads on Students' Evaluations of Teaching. *American Educational Research Journal*, 38(1), 183-212. https://doi.org/10.3102/00028312038001183

Marsh, H. W., & Overall, J. U. (1979). Long-term stability of students' evaluations: A note on Feldman's "consistency and variability among college students in rating their teachers and courses". *Research in Higher Education*, *10*(2), 139-147. https://doi.org/10.1007/BF00976226

Marsh, H. W., & Roche, L. (1993). The Use of Students' Evaluations and an Individually Structured Intervention to Enhance University Teaching Effectiveness. *American Educational Research Journal*, *30*(1), 217-251. https://doi.org/10.3102/00028312030001217

Marshall, K. (2009). *Rethinking Teacher Supervision and Evaluation: How to Work Smart, Build Collaboration, and Close the Achievement Gap*. Wiley. https://books.google.com/books?id=qxIY3BP2fCAC

Marshall, P. (2022). Contribution of open-ended questions in student evaluation of teaching. *Higher Education Research & Development*, *41*(6), 1992-2005. https://doi.org/10.1080/07294360.2021.1967887

Martínez, J. F., Schweig, J., & Goldschmidt, P. (2016). Approaches for Combining Multiple Measures of Teacher Performance:Reliability, Validity, and Implications for Evaluation Policy. *Educational Evaluation and Policy Analysis*, *38*(4), 738-756. https://doi.org/10.3102/0162373716666166

McEwan, P. J., & Soderberg, K. A. (2006). Roommate Effects on Grades: Evidence from First-Year Housing Assignments. *Research in Higher Education*, *47*(3), 347-370. https://doi.org/10.1007/s11162-005-9392-2

McMillan, A., Solanelles, P., & Rogers, B. (2021). Bias in student evaluations: Are my peers out to get me? *Studies in Educational Evaluation*, *70*, 101032. https://doi.org/10.1016/j.stueduc.2021.101032

Morin, A. J. S., & Marsh, H. W. (2015). Disentangling Shape from Level Effects in Person-Centered Analyses: An Illustration Based on University Teachers' Multidimensional Profiles of Effectiveness. *Structural Equation Modeling: A Multidisciplinary Journal*, *22*(1), 39-59. https://doi.org/10.1080/10705511.2014.919825

Morrison, A. (2021). JUST DESERTS? GRADE INFLATION AND DESERT-BASED JUSTICE IN ENGLISH HIGHER EDUCATION. *British Journal of Educational Studies*, *69*(4), 437-451. https://doi.org/10.1080/00071005.2020.1832957

Müller-Benedict, V., & Gaens, T. (2020). A new explanation for grade inflation: the long-term development of German university grades. *European Journal of Higher Education*, *10*(2), 181-201. https://doi.org/10.1080/21568235.2020.1718516

Nevid, J. S. (2018). *Essentials of psychology: Concepts and applications*. Cengage Learning. https://thuvienso.hoasen.edu.vn/handle/123456789/7441

Nolan, J., & Hoover, L. A. (2007). *Teacher Supervision and Evaluation: Theory into Practice*. Wiley. https://books.google.com/books?id=zRlbAAAACAAJ

Park, B., & Cho, J. (2023). How does grade inflation affect student evaluation of teaching? *Assessment & Evaluation in Higher Education*, *48*(5), 723-735. https://doi.org/10.1080/02602938.2022.2126429

Radmacher, S. A., & Martin, D. J. (2001). Identifying Significant Predictors of Student Evaluations of Faculty Through Hierarchical Regression Analysis. *The Journal of psychology*, *135*(3), 259-268. https://doi.org/10.1080/00223980109603696

Reed, W. R., & Ye, H. (2011). Which panel data estimator should I use? *Applied Economics*, *43*(8), 985-1000. https://doi.org/10.1080/00036840802600087

Schmelkin, L. P., Spencer, K. J., & Gellman, E. S. (1997). Faculty Perspectives on Course and Teacher Evaluations. *Research in Higher Education*, *38*(5), 575-592. https://doi.org/10.1023/A:1024996413417

Shakurnia, A. (2012). Results of student ratings: Does faculty attitude matter? [Short Communication]. *Iranian Journal of Medical Education*, *12*(1), 33-35. http://ijme.mui.ac.ir/article-1-2014-en.html

Shakurnia, A., Malayeri, A. R., Torabpour, M., & Elhampour, H. (2006). Correlation between Student Evaluation of Teaching and Students' Grades. *Iranian Journal of Medical Education*, 51-58.

Spooren, P., & Christiaens, W. (2017). I liked your course because I believe in (the power of) student evaluations of teaching (SET). Students' perceptions of a teaching evaluation process and their relationships with SET scores. *Studies in Educational Evaluation*, *54*, 43-49. https://doi.org/10.1016/j.stueduc.2016.12.003

Uttl, B., White, C. A., & Gonzalez, D. W. (2017). Meta-analysis of faculty's teaching effectiveness: Student evaluation of teaching ratings and student learning are not related. *Studies in Educational Evaluation*, *54*, 22-42. https://doi.org/10.1016/j.stueduc.2016.08.007

Wilson, M. (2019). Emerging issues in classroom assessment. *Classroom Assessment and Educational Measurement*, 265. https://library.oapen.org/bitstream/handle/20.500.12657/54181/9780429017612.pdf?sequence=1#page=276

Yaghoubi , M., & Salimi , M. (2018). Determining the Factors affecting Facultie's educational evaluation in a Military University of Medical Sciences in Tehran, Iran. *Journal of Military Medicine*, *20*(1), 73-82. https://www.magiran.com/paper/1811220

Yorke, M. (2007). *Grading student achievement in higher education: Signals and shortcomings*. Routledge. https://www.taylorfrancis.com/books/mono/10.4324/9780203939413/grading-student-achievement-higher-education-mantz-yorke

Yousefi, A., Jamshid nejad, A., & Moatamed, N. (2018). Evaluation of Relationship between Academic Motivation and Achievement in Students of Zanjan University of Medical Sciences [Orginal Research]. *Journal of Medical Education Development*, *11*(29), 54-62. https://doi.org/10.29252/edcj.11.29.54

Ziaee , M., Miri , M., Haji-Abadi , M., Azarkar , G., & Eshbak , P. (2007). Academic staff and student's impressions on academic evaluation of students in Birjand University of Medical Sciences and Health Services. *Birjand University of Medical Sciences*, *13*(4), 61. https://www.magiran.com/paper/414915

Zibaei , M., & Azizi , K. (2012). Designing and Evaluating Teaching Quality Assessment from the Viewpoint of Lorestan University of Medical Sciences Students in 2010. *Journal of Medical Education Development*, *5*(8), 58-68. https://www.magiran.com/paper/1025502