KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 05 July 2023
Accepted 11 August 2023
Published online 01 September 2023

International Journal of Innovation Management and Organizational Behavior

Volume 3, Issue 3, pp 128-134

IJIMOB International Journal of Innovation Management and Organizational Behavior

E-ISSN: 3041-8992

Presenting the Pathology Model of Descriptive Evaluation System in Primary Education (Case Study: Alborz Province)

Roya. Najarian[1], Amirhossein. Mehdizadeh[2*], Nahid. Shafiee[2], Nader. Barzegar[2], Batoul. Faghiharam[2]

[1] PhD Student, Department of Educational Sciences, Islamic Azad University, Islamshahr Branch, Islamshahr, Iran
[2] Assistant Professor, Department of Educational Sciences, Islamic Azad University, Islamshahr Branch, Islamshahr, Iran

*** Corresponding author email address**: Amir.hMehdizadeh@yahoo.com

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Najarian, R., Mehdizadeh, A., Shafiee, N., Barzegar, N., & Faghiharam, B. (2023). Presenting the Pathology Model of Descriptive Evaluation System in Primary Education (Case Study: Alborz Province). *International Journal of Innovation Management and Organizational Behavior*, *3*(3), 128-134.
https://doi.org/10.61838/kman.ijimob.3.3.16

A B S T R A C T

Objective: The purpose of the present research was to pathologize the descriptive evaluation system and present a suitable model in primary education (case study of Alborz Province).

Method: This study is descriptive-survey in nature. The statistical population includes experienced teachers and doctorate-level educators in the field of primary education in Alborz Province. Using Cochran's formula and a simple random sampling method, a sample size of 384 was determined. The research instrument was a researcher-made questionnaire derived from the qualitative section. Validity was confirmed in two forms: 1. Face validity and 2. Construct validity, which includes two types of convergent and divergent validity confirmed by the “Fornell and Lurcher” method. Reliability was obtained as 1. Composite Reliability (CR) and 2. Cronbach's Alpha coefficient of 0.83. The data analysis of the model's validity was conducted using confirmatory factor analysis, and its reliability was examined using Cronbach's Alpha coefficient, employing Smart PLS software.

Findings: Findings indicated that the pathology of descriptive evaluation in the primary period of Alborz Province, considering the lived experiences of expert teachers in Alborz Province, consisted of three main categories (dimensions): social damages, individual damages, and organizational damages. Additionally, it showed that the model derived from the synthesis of research texts related to descriptive evaluation in primary education included five main categories (dimensions): prerequisites, inputs, effective roles, outputs, and goals, each of these dimensions having their own components. It also demonstrated that reliability coefficients for the questionnaires of prerequisites, inputs, outputs, effective roles, and goals, and their components were all above 0.7, indicating the high precision of the measurement tools used in this research.

Conclusion: This model can serve as a guide for educators and policymakers in improving evaluation practices and ultimately, the quality of education in primary schools.

Keywords: *Pathology, Descriptive Evaluation, Primary School, Education.*

1 Introduction

In the last two decades, the knowledge and skills required for success in modern life have changed due to developments in the fields of economy, society, and technology. Accordingly, reforming academic evaluation methods at all levels, from large-scale examinations to classroom assessment, is necessary. In recent decades, most experts in evaluation and classroom assessment have emphasized alternative methods of assessment and evaluation, where students are directly assessed through activities in real-world tasks, and teachers can use these types of assessments as tools to facilitate teaching and learning. In these assessments, the boundary between teaching, learning, and assessment is blurred, and students monitor their own work and that of others, being responsible for their own learning and that of others. As a result, in most advanced and developing countries, a wave of reforms in the evaluation and classroom assessment system has occurred (Bent et al., 2016; Heuvel-Panhuizen et al., 2021).

Also, the challenges facing educational systems have made improving the quality of education a fundamental necessity. In this regard, evaluation, as one of the essential elements of the curriculum, is considered an effective factor in improving the quality of education. Generally, any activity aimed at transferring, stimulating, and acquiring knowledge, attitudes, and skills uses educational evaluation as a continuous and regular process to describe, guide, and ensure the quality of its educational activities. Descriptive qualitative evaluation, like any new plan and change in the educational system, faces its own specific problems and challenges, which make it difficult to fully and accurately achieve the goals of this evaluation (Jess et al., 2014; Kayal, 2019).

The descriptive evaluation system in the primary education in Iran has been implemented since the 2004-2005 academic year, with the aim of making fundamental changes in the existing evaluation system. This was done in consideration of modern approaches in the teaching-learning process and effective evaluation methods of students, based on the guidelines of the Supreme Council of Education in a number of primary schools. This system emphasizes changing the quantitative scale (0-20) to a qualitative scale (descriptive evaluation) and shifting from final evaluation to formative evaluation (Ahmady et al., 2019).

Therefore, assessment and evaluation are important parts of the education system in any country. In recent years, our country has shifted from traditional methods of evaluation to modern descriptive methods. This change should be seen not only in appearance but also in the essence and structure of the assessment and evaluation system. Therefore, descriptive evaluation plays an important role in the new education system. In fact, descriptive evaluation brings a new perspective to the role of the teacher, the role of the student, and the place of evaluation in the teaching-learning process, influenced by new findings in psychology, new approaches in curriculum planning, and the experience of other countries. Therefore, the necessity of having a valid assessment and evaluation in the education system and focusing on its characteristics and features becomes evident (Dadkani et al., 2021).

Consequently, the main objective of the present research is to gain a deep understanding of primary education teachers' perspectives on the potential damages of implementing the descriptive evaluation plan and its consequences on the teaching-learning process and the quality of students' academic progress. The research ultimately addresses this important issue: "What are the harms of the descriptive evaluation system in primary education and what is the most suitable model for it?"

2 Methods and Materials

2.1 Study Design and Participants

This study is descriptive-survey in nature. The statistical population includes experienced teachers and doctorate-level educators in the field of primary education in Alborz Province. Using Cochran's formula and a simple random sampling method, a sample size of 384 was determined.

2.2 Data Collection Tool

In this research, a questionnaire was used as the research tool. This questionnaire was prepared with 217 items and was designed with a 5-point Likert scale. According to this scale, the scores for each range were considered as follows, with the lowest score being 1 and the highest score being 5. To assess the validity of the research questionnaire, which had been considered for validating the model, both face validity and construct validity were used, including two types of convergent and divergent validity. For face validity, a version of the questionnaire was given to 5 faculty members in the field of curriculum planning, and explanations about how the questionnaire was prepared were provided through interviews, after which the face validity of the questionnaire was confirmed. In the construct validity

IJIMOB
E-ISSN: 3041-8992

section (convergent and divergent), the "Fornell and Lurker" method was used, and both convergent and divergent validity were confirmed as both values are at a standard and acceptable level. For assessing and evaluating the reliability of the research questionnaire, Composite Reliability (CR) and Cronbach's Alpha coefficient were used, and the overall reliability of the questionnaire was found to be 0.83 through this test. The reliability of the questionnaire was confirmed as both values are at a standard and acceptable level.

2.3 Data Analysis

To examine the validity of the proposed model, the model's validity was analyzed using confirmatory factor analysis, and its reliability was evaluated using Cronbach's Alpha coefficient, employing Smart PLS software.

3 Findings and Results

Overall, the demographic characteristics of the experienced and educated teachers participating in the current study in primary education comprised 384 individuals, of which 216 (56%) were men and 168 (44%) were women. From an educational perspective, 226 individuals (59%) hold a bachelor's degree, and 145 individuals (38%) have postgraduate education. Thirteen individuals (3%) possess doctoral degrees. In terms of age, 134 individuals (35%) are under 35 years old, 196 individuals (51%) are between 35 and 45 years old, and 54 individuals (14%) are 45 years or older. From a work experience perspective, 136 individuals (35%) have less than 10 years of experience, 152 individuals (39%) have 10 to 15 years of experience, 56 individuals (15%) have between 15 to 20 years of experience, and 40 individuals (11%) have more than 20 years of experience.

The paradigm model of the component variables of the descriptive evaluation model for the primary period in Alborz Province is presented in the Figure 1. This model includes each dimension of the descriptive evaluation model for the primary period in Alborz Province and its components.

Table 1

Factor Loadings and T-Values of Components of Questionnaire Dimensions

Dimensions	Components	Factor Loading	T-Value
Prerequisites	Teacher Education	0.54	10.86
	Clarification	0.62	11.11
	Supportive Factors	0.64	10.78
	Standards and Scales	0.8	13.41
	Policy-Oriented Factors	0.62	11.14
Inputs	Skill-Oriented Factors	0.66	10.86
	Creativity-Oriented Factors	0.54	11.11
	Book-Based Factors	0.3	10.78
	Attitude-Oriented Factors	0.66	13.41
	Balance-Oriented Factors	0.64	8.51
	Feedback-Based Factors	0.67	10.16
	Environmental Factors	0.66	10.74
	Flexible Factors	0.54	10.86
	Quality Enhancement Factors	0.54	11.11
Outputs	Metacognitive Factors	0.67	10.86
	Monitoring-Oriented Factors	0.66	11.11
	Analysis-Based Factors	0.54	10.78
	Types of Evaluation	0.71	13.41
	Evaluation Tools	0.54	11.16
Effective Roles	Role of Teacher	0.68	10.86
	Role of Student	0.72	11.11
	Role of Parents	0.57	10.78
Goals	Educational Goals	0.58	10.86
	Psychological Goals	0.58	11.11
	Developmental Goals	0.62	12.75

The observed factor loading in all cases is greater than 0.3, indicating that the correlation between the latent variables (dimensions of each of the main constructs) and the observable variables is acceptable. After identifying the

IJIMOB
E-ISSN: 3041-8992

correlation of variables, a significance test must be conducted. To examine the significance of the relationship between variables, the t-value statistic is used. Since significance is examined at the 0.05 error level, if the t-value test statistic is greater than the critical value of 1.96, the relationship is significant. Based on the results of the measurement indices, at a 5% confidence level, the t-value statistic is greater than 1.96, indicating that the observed correlations are significant.

To express the acceptability of the model, indices such as the Bentler-Bonett normed fit index, relative fit index, incremental fit index, comparative fit index, and Chi-square have been used, with the results of the model shown in Table 4-21.

Root Mean Square Error of Approximation (RMSEA): This index is based on the analysis of the residual matrix and, unlike many fit indices, can be calculated for different confidence intervals. It is based on a non-central parameter. If the value of this index is zero, it indicates that the Chi-square is smaller than the degrees of freedom, and its permissible limit is 0.1. The obtained RMSEA value is 0.018, which is desirable considering the standard value is less than 0.1.

Normed Fit Index (NFI) or the Bentler-Bonett normed fit index obtained is 0.95, which, considering the standard value of 0.9 as the desirable limit for this index, indicates that the model enjoys a satisfactory fit according to this index.

Relative Fit Index (RFI) obtained is 0.99, indicating that this index also points to a suitable fit for the model.

Incremental Fit Index (IFI) obtained is 0.99, which also indicates a suitable fit for the model.

Comparative Fit Index (CFI) obtained is 0.98, indicating that this index also points to a suitable fit for the model.

Normalized Chi-Square (X2/df): This index is obtained by dividing the Chi-square by the degrees of freedom. The ratio of Chi-square to degrees of freedom is 2.223, which is desirable. Overall, considering all the indices, it can be said that the model has an appropriate fit. Factor loadings indicate the extent to which the observed variable influences the explanation and measurement of its related latent variables. To confirm factor loading, the level of significance is considered.

Also, Cronbach's Alpha coefficient was used to examine the reliability of the dimensions and components obtained. The reliability coefficients for the questionnaires of the dimensions of prerequisites, inputs, outputs, effective roles, and goals, and their components are shown in Table 2.

Table 2

The Results of Cronbach's Alpha Reliability Test

Component of the Questionnaire	Cronbach's Alpha Coefficient	Number of Items
Teacher Education	0.762	10
Clarification	0.878	8
Supportive Factors	0.546	11
Standards and Scales	0.938	16
Policy-Oriented Factors	0.859	7
Total Score of Prerequisites	0.955	52
Skill-Oriented Factors	0.938	4
Creativity-Oriented Factors	0.832	5
Book-Based Factors	0.949	3
Attitude-Oriented Factors	0.938	11
Balance-Oriented Factors	0.882	17
Feedback-Based Factors	0.920	3
Environmental Factors	0.762	5
Flexible Factors	0.878	3
Quality Enhancement Factors	0.546	5
Total Score of Inputs	0.963	56
Metacognitive Factors	0.882	5
Monitoring-Oriented Factors	0.955	10
Analysis-Based Factors	0.859	3
Types of Evaluation	0.832	6
Evaluation Tools	0.949	9
Total Score of Outputs	0.941	33
Role of Parents	0.955	2

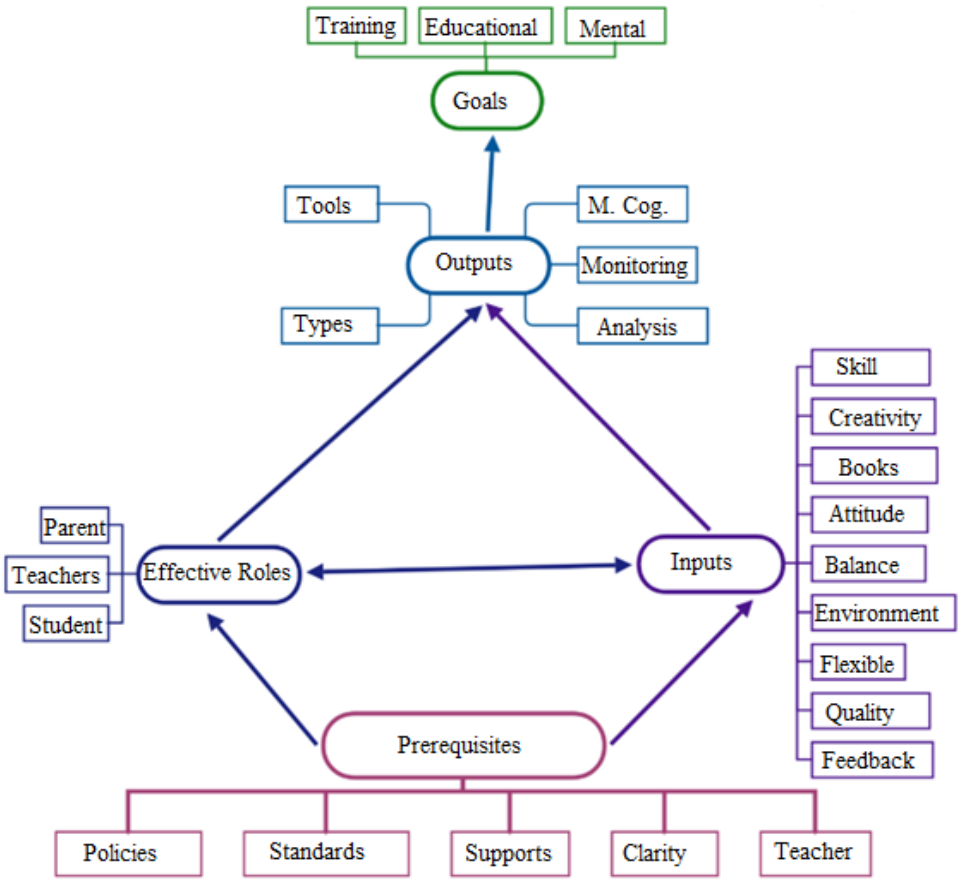
IJIMOB
E-ISSN: 3041-8992

Role of Teacher	0.859	14
Role of Student	0.832	4
Total Score of Effective Roles	0.941	20
Educational Goals	0.859	23
Psychological Goals	0.832	21
Developmental Goals	0.879	12
Total Score of Goals	0.963	56

According to the findings of the Table 2, the reliability coefficients for the questionnaires of the dimensions of prerequisites, inputs, outputs, effective roles, and goals, and their components were calculated, all being above 0.7, indicating the high accuracy of the measurement tool used in this research.

Figure 1

Paradigm Model



4 Discussion and Conclusion

According to the findings, the reliability coefficients for questionnaires on dimensions of prerequisites, inputs, outputs, effective roles, objectives, and their components were calculated to be all above 0.7, indicating the high accuracy of the measurement tool used in this research.

To explain these findings, it can be said that reviewing evidence, documents, and research findings confirms the existence of strengths, weaknesses, obstacles, and problems in the system of assessing learning in primary education in the country, and a lack of deep and profound understanding of them. This study attempts to represent, without any bias, the lived experience of primary teachers in implementing this system. A review of the existing research background speaks of the multitude and variety of weaknesses and some strengths in implementing this system. Based on conducted studies, the most important strengths mentioned include a)

IJIMOB
E-ISSN: 3041-8992

increased student participation in discussion and dialogue, b) elimination of exam anxiety, and c) better alignment with evaluation standards (Ahmady et al., 2019; Aziz et al., 2018; Dolati et al., 2016; Ghasemi et al., 2018; Heuvel-Panhuizen et al., 2021). On the other hand, a review of published findings shows the existence of weaknesses, resulting in adverse effects and consequences for students, teachers, and the overall educational system. Some are due to the nature of the descriptive evaluation plan, some due to the implementation method and the incompatibility of this program with the current situation of most schools in the country, and some related to the previous evaluation system (Dadkani et al., 2021; Dolati et al., 2016).

Based on research evidence and existing documents, the most important weaknesses associated with the learning assessment system include: 1) Decreased motivation in primary school students due to lack of competition. 2) The focus of the learning assessment system on learning outcomes; primary teachers' focus on recall and rote learning, leading to negligence of higher-order thinking processes in students Primary teachers' failure in motivating students and assessing their learning. 4) The failure of the descriptive evaluation plan in addressing higher cognitive goals, enhancing students' attitudes towards learning, deepening learning, durability of learning, using various descriptive assessment tools, providing process feedback for learning improvement, creating a correctional environment for students and teachers to address learning deficiencies, reducing parents' sensitivity to grades, and improving learning opportunities through parental participation in teaching and learning (Ahmady et al., 2019; Aziz et al., 2018; Ghasemi et al., 2018). 5) The failure of the descriptive evaluation plan in its primary goal of reducing stress and enhancing emotional attributes of students compared to traditional system students (Rezaei, 2006). 6) The failure of the descriptive evaluation plan in enhancing the qualitative performance of students (Dadkani et al., 2021; Dolati et al., 2016). 7) Low enthusiasm and negative attitude of primary teachers towards continuous evaluation activities. 8) Unsatisfactory level of primary teachers' awareness of formative evaluation methods. 9) The failure of the descriptive evaluation plan in enhancing the level of students' learning (Heuvel-Panhuizen et al., 2021). 10) Lack of a clear model for providing feedback in schools; indicating the necessity of examining the results and consequences arising from the learning assessment model in the primary education system, known as descriptive evaluation. Preliminary evidence suggests widespread protest by many experienced primary education teachers and parents and its detrimental effects on teachers' educational performance and, consequently, the reduction of depth and quality of learning in students.

Our educational system has also undergone significant changes in recent years in terms of structure, content, and executive methods, following which quantitative evaluation methods have shifted towards qualitative and process-oriented evaluation. The new approach is the transition from a behaviorist perspective to a constructivist view, emphasizing the active role of the student in constructing their knowledge (Jess et al., 2014; Kayal, 2019). The qualitative-descriptive evaluation model, as a more complete version of continuous evaluation, seeks to establish its different approach in the educational system (Bent et al., 2016; Blankman et al., 2014). In the discussion of factors influencing teachers, teachers' beliefs and decisions in creating change (Jess et al., 2014; Tohidian et al., 2022; Whewell, 2019), teachers' attitudes (Blankman et al., 2014; Jess et al., 2016), as well as teachers' personal concerns about the level of support they receive in implementing the plan and their readiness, are influential factors. Appreciating teachers appropriately, consulting them, creating interest and motivation, and supporting them, and creating a cooperative and interactive environment among teachers (Blankman et al., 2014; Jess et al., 2014; Tohidian et al., 2022) are other factors affecting the implementation of this change.

5 Limitations and Suggestions

This study, while comprehensive, is not without its limitations. Firstly, the sample size, although statistically significant, is limited to a specific geographic region, potentially restricting the generalizability of the findings to other areas with different educational systems or cultural contexts. Secondly, the reliance on self-reported data through questionnaires may introduce a degree of response bias, as participants might have provided socially desirable answers or may not have fully understood the questions. Additionally, the cross-sectional nature of the study limits the ability to draw conclusions about causality or long-term effects of the educational interventions under investigation.

Future research should focus on expanding the geographical scope to include a more diverse range of educational settings, thus enhancing the generalizability of the findings. Longitudinal studies would be valuable in understanding the long-term impacts and sustainability of

IJIMOB
E-ISSN: 3041-8992

the educational interventions and reforms. Furthermore, incorporating qualitative methods such as interviews or focus groups could provide deeper insights into the experiences and perspectives of teachers and students, offering a more nuanced understanding of the educational phenomena. Also, exploring the integration of technological advancements in assessment methods could provide innovative approaches to educational evaluation.

The implications of this study are multifaceted. For educational policy-makers, the findings highlight the need for ongoing teacher training and support, especially in the implementation of new assessment systems. Schools should consider adopting a more holistic approach to student assessment, one that encompasses not only cognitive aspects but also emotional and social development. Furthermore, it is imperative to involve teachers actively in the reform process, as their firsthand experience and insights are invaluable in shaping effective educational policies. For practitioners, incorporating a variety of assessment methods, including formative and descriptive approaches, can enhance student engagement and learning outcomes. Lastly, it is crucial to establish a feedback system where students, teachers, and parents can share their experiences and concerns, ensuring continuous improvement in the educational process.

Acknowledgments

The cooperation of all participants in the research is thanked and appreciated.

Declaration of Interest

The authors of this article declared no conflict of interest.

Authors Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Ethics principles

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

References

Ahmady, G. A., Sheikholeslami, H., Assareh, A., & Reyhani, E. (2019). On the evaluation of the math curriculum of 10 grade of high school from the view point of the math teachers. *Technology of Education Journal (TEJ)*, *13*(2), 327-339. https://doi.org/10.22061/jte.2018.3161.1802

Aziz, S., Mahmood, M., & Rehman, Z. (2018). Implementation of CIPP Model for Quality Evaluation at School Level: A Case Study. *Journal of Education and Educational Development*, *5*(1), 189-206. https://eric.ed.gov/?id=EJ1180614

Bent, G. J., Bakx, A., & Brok, P. d. (2016). Comparison Between Primary Teacher Educators' and Primary School Teachers' Beliefs of Primary Geography Education Quality. *Australian Journal of Teacher Education*. https://doi.org/10.14221/ajte.2016v41n7.7

Blankman, M., Schee, J. v. d., Volman, M., & Boogaard, M. (2014). Primary Teacher Educators' Perception of Desired and Achieved Pedagogical Content Knowledge in Geography Education in Primary Teacher Training. *International Research in Geographical and Environmental Education*. https://doi.org/10.1080/10382046.2014.967110

Dadkani, M. Y., Saadatmand, Z., & Rahmani, J. (2021). Designing a Decentralized Primary Education Curriculum in Iran [Applicable Artice]. *Iranian Journal of Educational Sociology*, *4*(3), 61-67. https://doi.org/10.52547/ijes.4.3.61

Dolati, A., Jamshidi, L., & Amin Bidakhti, A. A. (2016). Improving the teaching-learning process of smart schools from the perspective of evaluation. *Journal of Education and Learning Studies*, *7*(2), 1-20. https://doi.org/10.22099/jsli.2016.3687

Ghasemi, M., Fardanesh, H., Hatami, J., & Ahmady, S. (2018). Evaluation of the Electronic Learning System of Medical Education (Case Study of Shahid Beheshti Medical School) [Qualitative Research]. *Bimonthly of Education Strategies in Medical Sciences*, *11*(4), 39-52. https://doi.org/10.29252/edcbmj.11.04.06

Heuvel-Panhuizen, M. v. d., Sangari, A. A., & Veldhuis, M. (2021). Teachers' Use of Descriptive Assessment in Primary School Mathematics Education in Iran. *Education Sciences*. https://doi.org/10.3390/educsci11030100

Jess, M., Atencio, M., & Carse, N. (2016). Integrating Complexity Thinking With Teacher Education Practices: A Collective Yet Unpredictable Endeavour in Physical Education? *Sport Education and Society*. https://doi.org/10.1080/13573322.2016.1225195

Jess, M., Keay, J., & Carse, N. (2014). Primary Physical Education: A Complex Learning Journey for Children and Teachers. *Sport Education and Society*. https://doi.org/10.1080/13573322.2014.979142

Kayal, T. K. (2019). Primary Education in India: An Analysis of Comparative Performance of Districts. *Indian Journal of Human Development*. https://doi.org/10.1177/0973703019892211

Tohidian, I., Taskoh, A. K., & Abbaspour, A. (2022). Urgent Changes to Be Made in Iran's Primary Education: Voices From Teachers. *ECNU Review of Education*. https://doi.org/10.1177/20965311221085980

Whewell, E. (2019). Primary Physical Education Teacher Identity. https://doi.org/10.1007/978-981-13-1179-6_344-1

IJIMOB
E-ISSN: 3041-8992