The Situation of Forecasting the Number of Children and Students Attending School: An Exploration Study Based on Primary Teachers’ Evaluation in Vietnam

Luong Tran
School of Education, Can Tho University, Vietnam

Abstract
The paper presented the current situation of forecasting the number of children and students attending school in Ca Mau Province, Vietnam. A random survey of 89 primary school teachers in Ca Mau province with a questionnaire about the situation of the work of forecasting the number of children and students attending to school in Ca Mau Province showed that: The mean score of forecasting the number of children and students attending to school is 3.93 - corresponding to often level; the average point of the quality of the task of forecasting the number of children and students attending to school is 3.96 - at a fair level; the ensuring the development of education based on the results of forecasting the number of children and students attending to school with the mean of 2.92 - at a sometimes level. There is no correlation between forecasting the number of children and students attending school and ensuring conditions for education development based on the results of forecasting the number of children and students attending school.

Keywords: Children; Forecasting; Primary school; Teacher, Student.

1. Introduction
Enrollment forecasting is both an art and a science (Ibrakhimjon and Manisha, 2015). The forecasting is a predicting about the situation that is likely to occur, based on available data and information (Hoàng et al., 2016). Strategic forecasting is defined as a scientifically grounded activity focused on the research of possible transformations, on developing tendencies and prospects of subjects and objects of pedagogical activity (Prisyazhnaya, 2007). The Forecast is a probabilistic assessment of future results and ways of educational system development. It also covers the resources and activities, required to make it come true (Gaponyuk et al., 2012). Education forecast encompasses all implications of such forecasts within the educational domain including student numbers, educational needs according to societal development, socio-economic relationships, and the environment.

In short, the likely future status of the educational system (Dickson et al., 2015). Forecasting is seen as an objective necessity. Educational forecasting is significant in establishing a scientific basis for determining the direction, duties and major objectives of education and training (Scott, 1998) and the future status and orientation of the education system (Bogue, 1998). Management of education as a dynamic system requires forecasts on the prospects of its development to make necessary managing decision the quality of human (intellectual) assets and the efficiency of economics, in general, depend on the quality of forecasting, assessments and their efficient use in the process of educational system management. Forecasting in education is intended to provide positive balanced dynamics of regional educational programs development. The territorial aspect of balanced components of the educational system development supports the stable development of the educational system (Gaponyuk et al., 2012). The forecasting of the number of children and students attending school is predicting the number of children and students attending school in the future. The forecasting of the number of children and students attending school plays a very important role to ensure the conditions for educational development. Because the information about forecasting the number of children and students attending school is a scientific basis for educational managers to fully prepare the conditions for future educational development. In recent years, forecasting the number of children and students attending school has not been implemented which is one of the reasons for the lack of teachers the shortage or lack of schools, facilities, and equipment (VOV, 2018). This directly affects the quality of education, making education quality not as high as expected. Thus, researching the current situation of forecasting the number of children and students attending school in Ca Mau Province, Vietnam for preparing the conditions for the development of education is very necessary and urgent.

The research questions are posed that: How is the current situation of forecasting the number of children and students attending school in Ca Mau Province, Vietnam? Is there a correlation between forecasting the number of children and students attending school and ensuring conditions for education development based on the results of forecasting the number of children and students attending school?

This study was designed to find out the current situation of forecasting the number of children and students attending school in Ca Mau Province, Vietnam, and to determine the correlation between forecasting the number of children and students attending school and ensuring conditions for education development based on the results of forecasting the number of children and students attending school.
2. Methodology
2.1. Study Design
To carry out this research, the questionnaire method was used as the main research method. The questionnaires designed were delivered to 89 primary teachers in the Ca Mau Province, Vietnam. Subjects were randomly selected according to the uniform pattern of elementary schools in Ca Mau Province with 9 or 8 questionnaires per school. The study was carried out from June to July 2019.

2.2. Data Analysis
Primary teachers’ answers were assessed based on 05 points of Likert scale (James and Lee, 2011) and coded via SPSS for windows 16.0 as follows: scale 1 =1, Scale 2=2, Scale 3 =3, Scale 4 =4, Scale 5 =5.
Distance Value = (Maximum – Minimum) / n = (5-1)/5 = 0.8
Therefore, the meanings of the scales were understood as:
From 1 to 1.8= Never/poor
From 1.9 to 2.6= Seldom/weak
From 2.7 to 3.4= Sometimes/ medium
From 3.5 to 4.2= Often/ fair
From 4.3 to 5= always/good
The SPSS For Windows16.0 was used to analyze the data collected by Spearman Correlation, Mean, Std. Deviation, Percent, Frequencies.

3. Research Results
3.1. The Current Situation of Forecasting the Number of Children and Students Attending School

| Level | Scale | 1 | 2 | 3 | 4 | 5 | Mean | Standard Deviation |
|-------|-------|---|---|---|---|---|------|-------------------|
| Forecasting the number of children and students attending school | N | 0 | 5 | 15 | 50 | 19 | 3.93 | 0.78 |
| % | | 0 | 5.6 | 16.9 | 56.2 | 21.3 | |
| The quality of forecasting the number of children and students attending school | N | 0 | 2 | 12 | 63 | 12 | 3.96 | 0.601 |
| % | | 0 | 2.2 | 13.5 | 70.8 | 13.5 | |
| The ensuring conditions for education development based on results of forecasting the number of children and students attending school | N | 10 | 35 | 4 | 32 | 8 | 2.92 | 1.254 |
| % | | 11.2 | 39.3 | 4.5 | 36.0 | 9.0 | |

The data shown in table 1 illustrates the fact that the mean score of forecasting of the number of children and students attending school is 3.93-corresponding to often level. The quality of forecasting the number of children and students attending school is 3.96 - corresponding to a fair level. The ensuring conditions for education development based on results of forecasting the number of children and students attending school is 2.92- corresponding to sometimes level.

3.2. Correlative Coefficient between the Level of Forecasting the Number of Children and Students Attending School and Ensuring Conditions for Education Development Based on Results of Forecasting the Number of Children and Students Attending School

| Correlation coefficient | The level of forecasting the number of children and students attending school |
|-------------------------|---------------------------------|
| The ensuring conditions for education development based on results of forecasting the number of children and students attending school | Pearson Correlation 0.122 | Sig. (2-tailed) 0.254 | N 89 |

The result with sig. = 0.254 affirms that the level of forecasting the number of children and students attending to school and ensuring conditions for education development based on results of forecasting the number of children and students attending to school has no correlations.
4. Discussion

The previous studies explored the time series models in projecting the number of students enrolled in a course as forecasting support for electronic School Management System (Rabby and Mary, 2012); student numbers for 2015 to 2035 will fluctuate (Schmidt-Thome et al., 2015); for upcoming year, pupil strength in government school will be dropped down and number of teachers will be supersizing in the said district (Manisha et al., 2014) The forecasting of student numbers on the geographical basis and Genders showed considerable variations across different regions (Son Huynh et al., 2019b) and the number of the male children in the school-age was higher than that of the female children (Son Huynh et al., 2019a); a lack of population regulation policies will lead to a shortage of teachers (Labbé, 2019). Potekhina et al. (2016) confirmed the influence of dynamics of fixed assets on the number of employees with higher education. Also, authors have generated the forecast about future demand for specialists with higher education and the dynamics of fixed assets for the period from 2015 to 2025 years. Studying the forecast of the students’ number that will be enrolled at Petroleum–Gas University, Cornel and Mirela (2015) discovered the forecast emphasizes a slow but continuous trend of decreasing of the enrolled students, in the next five years and especially of those that pay tuition fee. Ibrakhimjon and Manisha (2015) used the data available on the website and also the data provided by the Office of the Number of the Institution of Research, Zayed University. The model predicts that the number of students in GE tends to increase linearly Dubai and Abu Dhabi campuses. It is not clear whether forecasting the number of children and students attending school is independent of ensuring conditions for education development based on the results of forecasting the number of children and students attending school.

The hypothesis put forward in this research is that there is no correlation between forecasting the number of children and students attending school and ensuring conditions for education development based on the results of forecasting the number of children and students attending school. The study results accept this hypothesis. Although forecasting the number of children and students attending school is implemented often but when preparing conditions to ensure the development of education often do not use the results of this forecast. The failure to use the forecast results or not correctly forecast the number of children and students going to school leads to the excess or lack of teachers, schools, classes, facilities and educational equipment.

5. Conclusion

The forecasting the number of children and students attending to schoolis implemented often, the quality of forecasting the number of children and students attending to school is fair, the ensuring conditions for education development sometimes based on results of forecasting the number of children and students attending to school. The recommendation drawn from the research results is that ensuring conditions for education development should be based on the results of forecasting the number of children and students attending school.

References

Bogue, E. G. (1998). Quality assurance in higher education: The evolution of systems and design ideals. New Directions for Institutional Research, 99: 7-18. Available: https://doi.org/10.1002/ir.9901

Cornel, L. and Mirela, L. (2015). Forecasting methods of the enrolled students’ number, economic insights. Trends and Challenges, 4(67): 41–51. Available: http://www.upg-bulletin-se.ro/archive/2015-2-5.Lazar_Lazar.pdf

Dickson, J. R., Hughes, B. B. and Irfan, M. T. (2015). Advancing global education. Routledge. Chapter 2. 14-30.

Gaponyuk, P. N., Mareev, V. I., Karpova, N. K. and Schipankin, E. S. (2012). Strategy of stable development of modern educational institutions multidimensional methodological phenomenon. Education, 2(7): 340-46.

Hoàng, P., Hoàng, T., Tuyệt, L., Vũ Xuân, L., Đào Thị, M. T., Phạm, Đ. T. and Đặng, T. H. (2016). Tư duy Tiếng Việt trong được. Nhà xuất bản Đà Nẵng, Việt Nam, trang. 204.

Ibrakhimjon, R. and Manisha, M. K. (2015). Forecasting the number of students in general education in university college using mathematical modelling. Journal of Mathematical Sciences: Advances and Applications, 32: 57-71. Available: http://scientificadvances.co.in/admin/img_data/923/images/JMSAA7100121465IbrakhimjonRakhimov.pdf

James, T. C. and Lee, O. (2011). Using likert-type scales in the social sciences. Journal of Adult Education, 40(1): 19-22. Available: https://files.eric.ed.gov/fulltext/ED961998.pdf

Labbé, D. (2019). Examining the governance of emerging urban regions in vietnam: The case of the red river delta. International Planning Studies, 24(1): 40-52. Available: https://doi.org/10.1080/13563475.2018.1517593

Manisha, S., Sanjay, S., Razaullah, K. and Balaji, A. (2014). Prediction of primary pupil enrollment in government school using data mining forecasting technique. International Journal of Advanced Research in Computer Science and Software Engineering, 4(9): Available: www.ijarcse.com

Potekhina, N., Shulinina, Y., Kuzmina, N., Potalisina, L. and Sannikova, I. (2016). Correlational-regression analysis application for the forecast of the specialists with higher education requirement in Russian economy. International Journal of Economics and Financial Issues, 6(2): 617-20. Available: https://ideas.repec.org/a/eco/journl/2016-02-34.html

Prisyazhnaya, A. F. (2007). Pedagogical forecasting within the system of continuing pedagogical education: Methodology, theory, practice: Thesis ... of ph.D. Of pedagogy: 13.00.08. RSL. Chelyabinsk. Russia. P.: 53.

Rabby, Q. L. and Mary, J. B. A. (2012). Enrollment forecasting for school management system. International Journal of Modeling and Optimization, 2(5): 563-66. Available: http://www.ijimo.org/papers/183-E018.pdf
Schmidt-Thome, P., Nguyen, T. H., Pham, T. L., Jarva, J. and Nuottimäki, K., 2015. "Climate change in Vietnam." In Climate change in Vietnam. In climate change adaptation measures in Vietnam. Cham: Springer. pp. 7-15.

Scott, P. (1998). Massification, internationalization and globalization. In scott, p. (ed), the globalization of higher education. England: SHRE/Open University Press: Buckingham.

Son Huynh, V., Vu Giang, T., Long Le, D. and Hong Nguyen, K. (2019a). Forecasting the number of children and students attending to school in Vietnam – the interest in gender difference. The Journal of Social Sciences Research, 5(7): 1176-83. Available: https://doi.org/10.32861/jssr.57.1176.1183

Son Huynh, V., Hong Nguyen, T. M., Khuong Nguyen, V., Loc Sam, V. and Vu Giang, T. (2019b). Forecasting the results of students attending school in Vietnam by geographical area. International Journal of Education and Practice, 7(3): 274-85.

VOV (2018). Sau sắp xếp, Cà Mau thưa hàng trăm giáo viên. Available: https://vov.vn/xa-hoi/sau-sap-xep-ca-mau-thua-hang-tram-giao-vien-812745.vov