

DOCTORAL DISSERTATION INFORMATION

Dissertation title: *Research Building up the models used for forecasting Vietnamese oversea seafarers human resources*

Speciality: Science of Navigation

Code: 9840106

Ph.D Candidate: Dao Quang Dan

Supervisor:

1. Prof. Dr. Dinh Xuan Manh

2. Prof. Dr. Le Quoc Tien

Educational Institution: Vietnam Maritime University

SUMMARY OF THE DISSERTATION

1. Aims, objective and content of the dissertation

The aim of the dissertation: Based on theoretical and practical research in forecasting, data mining techniques, machine learning to build up a forecasting model for human resources of exporting seafarers for Vietnam.

Objectives of the dissertation: Forecasting model for human resources of exporting seafarers for Vietnam.

The content of this dissertation includes: Research scientific and practical issues on Vietnam's export seafarers nationwide from 1992 to 2018;

Research the global seafarers' market, particularly pay special attentions to markets analyses of Japan, Korea, Taiwan, Singapore and China from 2005 to 2018;

Research, build up concept of exporting seafarers, definition of Vietnamese exporting seafarers and exporting seafarers market;

Research, apply data mining techniques, prediction and machine learning to build up a predictive modelling for forecasting human resources for Vietnam's export seafarers and construct software to forecast human resources of exporting seafarers to illustrate forecasting function of the constructed

model.

2. Methodology of the dissertation

To complete the dissertation, the PhD candidate used the historical materialist method first, dialectical materialist method.

The thesis also used other methods:

Statistical, data synthesis method;

Method of mathematical modeling;

Comparative method;

Professional solution;

Survey and investigational methods.

In addition, the dissertation also inherits researches, statistical figures and other related documents.

3. Scientific and Practical signification

Scientific signification:

Systematise and build up a theoretical basis for predicting human resources for Vietnam's export seafarers by clarifying the concept of export seafarers and analyzing the Vietnamese seafarers' export market. Select mathematical model for predicting human resources for export seafarers.

Applying advanced technology achievements with artificial intelligence, such as applying data mining techniques, machine learning to classify exporting seafarers data, thence build up a mathematical model and software for predicting human resources for export seafarers to illustrate the predictive function of the model.

Practical signification:

The dissertation made a scientific tool to solve the issues for predicting human resources for Vietnam's export seafarers. This tool ensures scientific, feasible flexibility and stability.

The proposed predictive modelling is the foundation to provide quick information in the process of making decisions and making policies on human

resources for export seafarers, orient the development for seafarers' export market, exploit and use seafarer resources effectively, build the structure and education plan and deploy a strategy to develop Vietnamese seafarers.

4. Main result and new findings of the dissertation

The first, the dissertation built up concept of export seafarers, definition of Vietnam's export seafarers and exporting seafarers market.

The second, the dissertation built a set of criteria and scientific scales for evaluating Vietnamese seafarers, creating a generation of Vietnamese seafarers who meet the requirement of exporting seafarers safely, accurately, fairly and effectively.

Lastly, the dissertation deployed the predictive modelling for human resources for export seafarers based on data mining techniques, associating rules and machine learning. Built up and classify export seafarers' data, thence built up a software for predicting human resources for export seafarers to illustrate the predictive function of the model.

SUPERVISOR



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