Abstract: although non-public universities and colleges have made significant contributions to higher education development, their operation still has many shortcomings. They have not fully exploited their potential and have not fully met the needs of society. Therefore, finding the key factors that significantly impact the training quality of private universities is an urgent task to solve the mentioned issue. The results show that these factors affecting the training quality of non-public institutions are training programs, teaching faculty, teaching methods, facilities, extracurricular activities, the interaction between school and business, administration activity, and characteristics of private universities. The study has brought real achievements on training at private institutions and help the Executive Board of schools understand the impacts of each factor on the quality of non-public higher education and how these factors are measured. Thanks to that, they can create measures to monitor, manage and adjust these factors.

Keywords: training quality, higher education, non-public universities, education in Vietnam, university administration, scientific research.
The research is conducted to evaluate the factors affecting the training quality of private universities in Vietnam. Thereby, this paper will suggest some appropriate solutions for improving this issue.

2. Theoretical basis, model, and hypothesis of the research

2.1. The concept of training quality

According to Tran Khanh Duc, “The quality of training is reflected in the characteristics of quality, personality, and labor value or the professional qualifications of the graduates corresponding to the goals and training programs for specific occupations” [10].

According to the research of Le Quang Son, “Training is a collaborative activity among subjects (who are teachers and learners). It is an organic unity of teaching and learning carried out within an educational institution. In which nature, scope, level, structure, and process of the activity are strictly and specifically defined in terms of objectives, programs, contents, methods, forms of organization, facilities, and teaching supplies to evaluate training results, time, and specific learners” [2].

In short, the training quality of universities is determined by how well they have provided their students with the knowledge to meet the demands of the knowledge society.

2.2. The concept of the training quality at university

According to Harvey and Knight, the quality of higher education can be divided into five groups, including: (1) Quality is superiority. (2) Quality is perfection. (3) Quality is in line with the goal. (4) Quality is value for money. (5) Quality is transformation [6].

In research, O'Neill and Palmer define higher education service quality as “the difference between what a student expects to receive and his/her perceptions of actual delivery” [7, p. 39-52].

Agreeing with previous studies, Parri (2006) concludes that the quality of higher education can be categorized into seven significant points of view, as follows: (1) Quality is superiority and excellence. (2) Quality is without any mistake. (3) Quality is consistent with the goal. (4) Quality is transformation and reshaping. (5) Quality is the threshold of standards, which means specific standards are defined. (6) Quality is enhancement or improvement. (7) Quality is value for money [9, p.107-111].

According to Chen et al. (2007), the quality of higher education training is a multi-directional concept that includes functions and activities such as training program, quality of teaching staff, government, facilities, students’ characteristics, management and administration activity, and interactive systems [1, pp.128-48].

2.3. A proposed research model

Based on the studies of Vo Thi Quy and Dam Tri Cuong [12], Ullah et al. [11], Jain et al. [4], Palli and Mamilla [8], the author suggests an 8-variable research model, as follow:

![Diagram showing the proposed research model with Training program, Teaching staff, Finance, Facilities, Mechanism and policy, Cooperation and Scientific Research, Administration activity, and Features of non-public universities all connected to Training quality.]
3. Research Methods

3.1. Measurement scales in research

The Likert scale is used to understand the level of agreement that the respondents have with a particular statement. The scale is coded with 5 groups (1: Totally disagree. 2: Disagree. 3: Neutral. 4: Agree. 5: Totally agree). The scale is evaluated by Cronbach's Alpha reliability coefficient.

3.2. Data collection

In this study, the research model has 8 independent variables and 1 dependent variable, corresponding to 58 observed variables. Therefore, the sample size according to Tabachnick and Fidell (1991; quoted by Hoang Trong, Chu Nguyen Mong Ngoc [3]) is n ≥ 114 (8*8+50) samples, and according to Harris RJ. Aprimer (1985; quoted by Hoang Trong, Chu Nguyen Mong Ngoc [3]) is n ≥ 113 (104+9) samples.

The author interviewed 400 lecturers, staff, and faculty leaders at non-public universities in the Southeast region.

4. Results

4.1. Cronbach’s Alpha

The results of Cronbach’s Alpha demonstrate that all eight scales have the acceptable Cronbach’s Alpha coefficient in terms of reliability (higher than the minimum level of 0.6). After considering the variable correlation coefficient, 53 variables are higher than 0.3. However, the GV1 variable was excluded because the total variable correlation coefficient is less than 0.3. Therefore, only 53 variables are used in the exploratory factor analysis (EFA). Scales and variables that achieve reliability will be used in the following exploratory factor analysis (EFA).

4.2. Exploratory factor analysis (EFA)

The scale of quality of non-public higher education includes 54 observed variables. According to Cronbach’s Alpha, 53 variables are used in the research model to be used to test EFA. KMO and Bartlett’s Test in factor analysis indicates that sig. = .000 and KMO coefficient is very high (0.864 > 0.5), so exploratory factor analysis (EFA) is suitable in this study.

4.3. Testing regression model and research hypotheses

According to the findings of exploratory factor analysis (EFA), the factors affecting the training quality of non-public universities are (1) Training program, (2) Teaching staff, (3) Finance, (4) Facilities, (5) Mechanism and policy, (6) Cooperation and scientific research, (7) Administration activity, and (8) Characteristics of non-public universities. These eight factors are independent variables. The dependent variable is the quality of private universities in the Southeast region (CL).

The regression model summary with the Enter command (all variables are entered simultaneously) is shown in Table 4.15.

The adjusted R2 coefficient is 0.585, which means that the variation of the eight following factors explains 58.5% of the variation in the training quality of non-public universities (CL), which are (1) Training program, (2) Teaching staff, (3) Finance, (4) Facilities, (5) Mechanism and policy, (6) Cooperation and scientific research, (7) Administration activity, and (8) Characteristics of non-public universities. The results show the Sig. value is minimal (Sig. = 0.000), so the regression model is suitable. The last column of the regression results shows that VIF is in the range from 1 to 1.1, so it can be concluded that there is no multicollinearity between the independent variables.

The results of determining the regression coefficients of independent variables shown in Table 4.17 indicate that explanations of the independent variables are statistically significant (Sig. < 0.05).

<table>
<thead>
<tr>
<th>Model</th>
<th>Regression coefficients</th>
<th>Normalized regression coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Multicollinearity</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>B Standard Bias Beta</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>Constant .021 .185 .113</td>
<td>.910</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CT .156 .022 .250 .7089</td>
<td>.000</td>
<td>.875</td>
<td>1.143</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GV .115 .027 .141 .4175</td>
<td>.000</td>
<td>.948</td>
<td>1.055</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TC .105 .024 .155 .4414</td>
<td>.000</td>
<td>.879</td>
<td>1.138</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CS .167 .019 .319 .8866</td>
<td>.000</td>
<td>.839</td>
<td>1.192</td>
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<tr>
<td></td>
<td>PL .116 .023 .190 .5120</td>
<td>.000</td>
<td>.789</td>
<td>1.268</td>
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<tr>
<td></td>
<td>NC .112 .028 .142 .4052</td>
<td>.000</td>
<td>.881</td>
<td>1.135</td>
<td></td>
</tr>
<tr>
<td></td>
<td>QT .075 .044 .071 1.688</td>
<td>.092</td>
<td>.613</td>
<td>1.632</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DT .164 .025 .228 6.598</td>
<td>.000</td>
<td>.907</td>
<td>1.103</td>
<td></td>
</tr>
</tbody>
</table>
The results reveal that eight factors affecting the training quality of non-public institutions are (1) Training program, (2) Teaching staff, (3) Finance, (4) Facilities, (5) Mechanism and policy, (6) Cooperation and scientific research, (7) Administration activity, and (8) Characteristics of non-public universities.

5. Administrative implications

Based on the findings in Section 4, we see that eight components make up the training quality of non-public higher education, which are: (1) Training program, (2) Teaching staff, (3) Finance, (4) Facilities, (5) Mechanism and policy, (6) Cooperation and scientific research, (7) Administration activity, and (8) Characteristics of non-public universities. Therefore, education administrators should pay more attention to the above eight components to improve the training quality of private schools. This section will present the specific meanings of the components and give some suggestions for administrators to strengthen the quality of non-public higher education.

5.1. Facilities

Facilities play a crucial part in creating the quality of non-public higher education. Therefore, education managers should provide adequate and advanced facilities for students in the learning and research process, contributing to enhancing the quality of higher education.

Elements of learning materials, school supplies, and facilities are indispensable in improving the training of non-public universities. However, at present, the limited education budget is considered as one of the fundamental causes leading to the poor and backward state of facilities and equipment of non-public universities. Therefore, enhancing the quality of training facilities and equipment of private universities will improve the quality of education and provide a comfortable and appropriate environment for students. A good training program must be accompanied by ownership of facilities, equipment, infrastructure, and lecture halls. The conditions for completing lectures are crucial requirements to increase the efficiency of higher education. Therefore, schools need to pay more attention to allocating funds to purchase equipment, add electronic documents and digital documents, and upgrade the software to meet the demands of work, rapidly modernizing facilities and training equipment.

5.2. Training program

The training program is an essential factor that creates higher education quality in general and non-public universities. Therefore, to enhance the training quality of a non-public university, education managers should be careful when developing training programs to ensure that the knowledge provided to students meets the actual needs. The course content helps them develop skills that can be applied in the workplace. Thanks to the knowledge and expertise gained from subjects, they can find jobs in the future.

Developing and renovating the objective and content of the training program will improve the quality to meet social needs in the context of international integration. It is imperative to renew, supplement, correct and perfect the training program of majors and specialties at all levels and detailed course outlines and corresponding program according to the output standards. Adjusting the learning program structure to suit each level's training goals is also an urgent task. In addition, it is crucial to research, select and approve several advanced and appropriate training programs of some countries around the world for joint training.

The Ministry of Education and Training should issue public documents on revising the training program's goal and content in the future. Non-public universities must recognize their current status to provide acceptable innovation orientations according to the State's general rules for non-public higher education institutions.

5.3. Characteristics of non-public universities

The characteristic of private universities is also one of the critical factors in determining the teaching standard of universities in general, and private universities in particular. Currently, there are weaknesses in implementing educational activities in non-public universities. In particular, the training program is focused on theory and undervalues practice, making students uninterested in learning. As a result, it is difficult for them to find suitable jobs after graduation.

Therefore, non-public universities must develop and follow training quality standards to make investment plans for this work. It is one of the long-term strategies for improving the training quality at universities.

In addition, private universities need to focus on enhancing the quality and improve governance capacity. They need to coordinate with businesses in training and creating chances for students to practice. It is vital to combine theory and practice so that learners meet the demands of the labor market after graduation. Finally, they need to connect with businesses and employers to expand job opportunities for students after graduation.

5.4. Finance

Finance is an indispensable factor in determining the efficiency of private higher education. Therefore, the State needs to issue sub-law documents to concretize and fully master the property rights of private universities while also giving them more autonomy in the future. In addition, the State also needs to create a legal framework to encourage individuals to invest in education. Expanding the autonomy and social responsibility of private universities is known as an urgent task. Moreover, the State should enhance its role in the following aspects:

- Establishing a mechanism to monitor the development of higher education.
- Building a legal environment to ensure the social responsibility of higher education institutions.
• Ensuring equity in higher education, associating the quality of higher education with budget investment.
• Strengthening the participation of the community in monitoring to evaluate the quality of higher education.

5.5. Mechanism and policy

Mechanism and policy are the factors that create the training quality of private universities. Modernizing mechanisms and policies is both an actual requirement and a driving force for development. In general, it is necessary to develop a set of criteria with specific targets on land, facilities, taxes, credits, training, and resources to bring the strategy of socialization of education to reality. It is necessary to create a mechanism to encourage private universities and foreign-invested universities to develop institutions for training high-quality human resources. Besides, changing the learning program in line with practical needs is also a necessary task.

It is essential to build an equal and fair legal framework between public universities and private universities. The legal system needs to be synchronous and particular so that subjects participating in educational activities clearly understand what they can do, what they can't do, and the levels of punishment if they violate the regulations.

5.6. Cooperation and scientific research

Cooperation and scientific research are essential factors in the development of non-public higher education. Therefore, education administrators need to improve the quality of this work. Collaboration brings a great source of benefits for universities, research centers, and companies. It can only be done by strengthening dialogue between the education sector and the job market. The focal points of this discussion are the training program and skills required by the job market.

All people relating to the scientific research and collaboration model between the universities and research institutions and businesses play an essential role in stimulating this relationship. To make it more attractive to the intellectuals and administrators at universities and to call for their active participation, the following actions need to be taken:

- Increasing awareness among intellectuals about the benefits of cooperation and encouraging individuals to work together with businesses. For example, we consider it a standard to evaluate the quality of lecturers' work, which may provide the intellectuals with motivation. However, the most important thing is that they are aware of the benefits of this relationship and consider it an exciting and desirable activity.
- Reducing the biggest barriers, especially securing funds for this activity and making the payment process and procedures as straightforward as possible.
- Promoting the forces that create relationships between intellectuals and business, and assisting in the building and managing those relationships like guiding expectations and building trust, commitment, and engagement between intellectuals and business.
- Encouraging intellectuals to spend time working with businesses by appropriate incentives or prioritizing recruiting lecturers who have worked in enterprises because they have a positive impact on expanding the cooperation relationship between schools and businesses.
- Developing a mechanism to create and establish linkages with businesses (through the four tasks outlined above) must be considered a priority strategy of the school and the government. The findings suggest that all four central actions significantly impact the level of cooperation between schools and companies.
- Learning experiences of countries that have built this partnership, and studying the factors that help them succeed, for example, the strategies of authorized people (in Switzerland), the mechanisms and approaches of experts (in the UK), and actions of leaders (in Ireland). It is necessary to study and adjust these experiences to the specific background of each school, especially in the particular context of Vietnam.

5.7. Teaching staff

The teaching staff is one of the factors that create the training quality of private universities and the primary key to ensuring the quality of higher education. Therefore, education administrators should continue to advance teachers' quality and teaching skills and provide suitable conditions for them to complete their mission successfully [5]. In addition, when developing a team of administrators and teachers of private universities, we need to pay attention to the planning to have enough quantity, synchronous structure, and standardization of qualifications.

Besides, professional training and cultivating must be efficient and serve the teaching work of the lecturers or other tasks that they will undertake. It is necessary to avoid the professional training and retraining that is only a formality as it has happened in reality and the mentioned situations.

Professional training and cultivating must contribute to improving the capacity and qualifications of lecturers. This work must be carried out regularly, continuously, and flexibly with many synchronous measures such as mobilizing, encouraging, and attaching the university's responsibility to the faculties, subjects, and lecturers who are sent for training and cultivating.

In addition, we shall ensure regimes and policies for lecturers and managers of private universities to fully enjoy the prescribed rule, which improves their material and spiritual life and creates a healthy pedagogical environment for them to work with peace of mind.
5.8. Administration activity

Administration activity is one of the factors affecting the training quality of non-public universities. Therefore, private universities need to innovate this activity. Higher education is facing new trends such as massification, diversification, modernization, privatization, commercialization, marketization, internationalization, and democratization. Therefore, educating is demanding a change in training methods to become a center of lifelong learning. Schools need to connect with high schools, remove faculty boundaries, move towards e-schools, strengthen networking, promote cooperation and international integration, narrow public and private boundaries and strengthen links between schools and businesses.

Innovating management at universities should focus on the following issues: management hierarchy, autonomy in schools and academic freedom, quality assurance, and control, transparency and accountability, building democratic space, mobilizing financial resources for education, applying the competition, and computerize the management system. In particular, innovation of management activity at schools needs to promote autonomy and apply business management experience (such as developing strategic plans, enhancing management efficiency, using information technology to market access). This task also aims to promote the development of private universities, corporatize public universities, and diversify higher education in terms of training programs and methods to meet job requirements.

In Vietnam, higher education management under the new public management model is developing on a large scale. However, there is still a big gap between “actual autonomy” and “textual autonomy,” and an accountability mechanism has not yet been established. As a result, private education is facing many challenges. Many mechanisms and policies have been issued and approved in recent years To overcome this situation, such as Education Administration Reform, Vietnam’s Law on Higher Education, Resolution No. 40, Resolution No. 29, Public Investment in the form of Public-Private Partnership (PPP), Vietnam - National Qualifications Framework, and Law on Vocational Education. It demonstrates the shifting in the state management model of higher education in Vietnam, from a command and control model to empowerment and supervision.

Schools need to vigorously innovate the content of the program and teaching methods towards international integration. The content of the program and the curriculum should be developed and deployed in an open direction (Schools should regularly update knowledge at home and abroad. It is recommended to use domestic or foreign textbooks and materials flexibly to teach learners). In addition, the content in teaching must be closely linked to and be appropriate for the realistic requirements of the jobs that students are pursuing. In terms of methods, it is necessary to use various teaching methods according to the principle of “A learner-centered approach” and minimize the teaching hours in class so that learners have more time to study and research independently.

6. Conclusion

This research investigates the components and scales affecting the training quality of non-public universities, develops scales to measure these factors, and builds and evaluates a theoretical model of the relationship between them.

The results and reasoning show that the scales meet the requirements after some revisions. The theoretical model is consistent with the market information, and most of the hypotheses are accepted. Specifically, the factors affecting the training quality of private universities are (1) Training program, (2) Teaching staff, (3) Finance, (4) Facilities, (5) Mechanism and policy, (6) Cooperation and scientific research, (7) Administration activity, and (8) Characteristics of non-public universities.

The study has brought practical results for training work at private universities. It helps the Executive Board of schools understand the impacts of each factor on the quality of non-public higher education and how these factors are measured. Thanks to that, they can take measures to monitor, manage and adjust these factors. At the same time, these findings also help them determine which elements need to be invested in to increase the quality of higher education.

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