VIETNAM’S QUALITY AND EFFICIENCY OF INVESTMENT IN EDUCATION

Nguyen Mau Hung
University of Science, Hue University
nguyenmauhung@quangbinh.edu.vn

ABSTRACT: Based on analysis results of authorities’ statistics by qualitative and quantitative methods, the article proves that Vietnam is one of the countries with the total resources invested in education and training at a high level. However, Vietnam’s quality and efficiency of investment in education are not really commensurate with potentials and hopes. Although human resource quality has been significantly improved compared to previous decades, labor productivity of Vietnamese is still relatively low compared to that of Southeast Asian countries. At the same time, informal investment resources of the people for education and training are relatively large, but the proportion of trained workers is still relatively low in the total number of population as well as in comparison with that of other countries in Asia. Vietnam’s quality and efficiency of investment in education are therefore an issue that needs more investments of stakeholders.

Keywords: Quality, efficiency, investment, education, Vietnam.

I. INTRODUCTION

Education is considered to be one of the shortest ways and the most effective solutions to change society and develop communities sustainably in the context of post-industrial era and digital age. Vietnam is one of the countries with a long tradition of fondness for learning. Both the state and citizens have prioritized and focused on investing nearly all the best resources possible for education and training with the philosophy that for the sake of ten years it needs to plant trees and for the sake of a century it needs to educate people. However, the effectiveness of this investment has recently been a controversial issue both at home and abroad. In such a context, how the actual quality and effectiveness of investment resources for education and training of a country can be assessed, what is Vietnam’s quality and effectiveness of investment resources for education and training in the past few decades, and how to invest in education in the most efficient and qualitative manner in the context of the current Industry Revolution 4.0? These questions have been an area of study of scholars around the world and in Vietnam for years. However, there has not been any in-depth research on Vietnam’s quality and effectiveness of investment resources for education in the current period compared to those of other countries in Asia and around the world [1]. For this reason, based on qualitative and quantitative methods as well as interdisciplinary and specialized approaches, the article uses statistics of authorities, research results of scientists, and updated information of the press to analyze the resources that both the state and society have favorably placed a great deal of faith in and expectation to invest in education in relation to real results for temporarily practical life as well as its long-term effect and impact on Vietnam’s educational philosophy and development strategy in the coming time. On the basis of the results of comparative analyses, the article offers a number of referenceable suggestions for Vietnam’s strategic orientation of investment in education in the future in the most quantitative and efficient manner possible.

II. THE RELATIONS BETWEEN RESOURCE INVESTMENT AND ACTUAL EFFICIENCY OF VIETNAM’S CURRENT EDUCATION SYSTEM

A. Investment resources for Vietnam’s current education and training

Vietnam’s current investment resources for education and training can be divided into three main types. The official state investment is conducted by the policy system, the organizational structure of apparatus, and the total amount of state budget for education. The private investment includes formal investments of educational institutions and informal investments of individuals, families, and society for education. The foreign investment consists of both formal types and informal forms for Vietnam’s education both inside and outside of the country.

State investment: the state often plays a leading role in investing in education and training. Vietnam’s annual public expenses for education is approximately 20 % of state budget (about 5 % of GDP) [2]. From 2013 to 2017, the scale of state budget spent on education always increased in absolute numbers with about 235,000 billion VND (roughly 20 % of the total state budget revenue) [3]. In 2018, the amount of state budget used for education and training was about 272,869 billion VND (an increase of 10 % compared to 2017) [4] of the total number of state budget expenditure of around 1.52 million billion VND [5]. In 2018, in addition to 272,869 billion VND from state budget, Vietnam’s education sector also earned approximately 31,439 billion VND. Of these, the expenditure for basic construction was 36,185 billion VND (13.26 %). The remaining amount of 236,684 billion VND (86.74 %) was used for regular spending [4]. This section was basically used to fund the operation of the national education system.
In the school year of 2017-2018, Vietnam had a total number of 43,907 educational institutions, including 40,952 public schools [3]. In 2018, Vietnam’s total number of state servants was roughly 2.3 million, of which: education and training sector accounted for 1.2 million (52 %) [6]. In 2018, the state budget spent 236,684 billion VND (86.74 %) in the section of recurrent expenditure on this apparatus [4]. In 2018, Vietnam had 1,954 vocational education institutions [7] covering all provinces of the country [8]. Of these, by early 2019 there were more than 1,500 public secondary schools and colleges [9]. By the end of 2016, Vietnam had 67,686 vocational teachers, of which: 41,577 (61.43 %) were public school teachers [10, p. 58]. All public educational institutions, including those belonging to the sectors of security, defense, and political education, are under the direct management and investment of state budget.

Training investment with foreign countries is usually not included in the total annual state budget for education and training, but on separate projects. Projects 322, 911 and 356 are the first scholarship programs using state budget to send education staff for training abroad. In the years of 2012-2016, Project 911 utilized 1,534,534 billion VND. Vietnam Government has just approved a total amount of 14,000 billion VND from state budget to train 9,000 academic doctors as a continuation of Project 911 in addition to a number of other ministries’ and local administrations’ ones [11]. If both short-term training courses and regular fostering programs organized by the state both domestically and abroad are considered, the total amount of public budget investment in Vietnam’s education and training activities is relatively significant compared to the total state budget revenue, total gross domestic product, and actual capacity of Vietnam’s current economy.

This is also a relatively high level of expenditure compared to that of several other countries all over the world, including the ones with higher socio-economic levels of development. Vietnam’s public spending on education and training/GDP in 2012 amounted to 6.3 %, while that of Singapore was only 3.2 % in 2010 and 2.9 in 2013, Malaysia was 5.1 % in 2011 and 6.1 % in 2013, Thailand was 3.8 % in 2011 and 4.1 % in 2013, and Brunei was 3.8 in 2014 [2]. This means that although the total amount of state budget revenue is still relatively moderate, Vietnam has spent everything she can to focus investment priorities on education and training. This makes Vietnam ranked in the list of countries with the highest investment rates for education in the world, but in terms of total amount of investment as well as per capital it is still very small in comparison with those of other other industrialized countries.

For this reason, limitations and shortcomings are unavoidable. Firstly, the ratio of actual spending for Vietnam’s university students per capital is clearly low [1]. While the United States spent an average of 19,000 USD for a university student, Australia 17,000 USD, England 15,000 USD, and New Zealand 14,000 USD, Vietnam invested only 630 USD for a student each year. Secondly, most of the state budget for education was used for recurrent spending (86.7 %), while the spending on development investment was only 13.3 % [12]. Thirdly, the investment structure for education and training of state budget was not appropriately balanced among educational levels. In the years of 2008-2014, around 69-70 % of state budget for education was spent on preschool and popular education (from the first to twelfth grade), the rest of about 30-31 % was spent on the remaining levels of national education system. Of these, the spending on college and university training was just over 12 % per year [2].

Private investment is the investments that do not come from the state budget, though they can be carried out through the activities and tools of state administration, and are usually conducted in two main ways. Official private investment is the investment activities that takes place through the witness and permission of the state administration. The most typical of these is the operation of the system of non-public educational institutions. In the school year of 2017-2018, Vietnam had a total number of 2,955 non-public schools with the number of people attending pre-kindergarten at 85 %, kindergarten 13 %, elementary schools 0.7 %, secondary schools 0.9 %, high schools 7 %, and universities 13 % [3] of the entire national education system. As of October 30, 2016, Vietnam had 665 (33.7 %) non-public vocational training institutions (both private and foreign invested) [10, p. 47]. Although in the early 2019, Vietnam had more than 450 non-public secondary schools and colleges [9]. As of December 31, 2016, Vietnam had 26,109 (39.57 %) [10, p. 58] non-public vocational teachers. All of these non-public educational institutions have been operate from contributions of formal private investment in an organized manner and with permission of the state.

In addition, private investment in education and training is also reflected in the activities commonly known as educational socialization. Thanks to these prioritized and attracting policies of investment capital, the socialization of education and training has contributed an addition of approximately 4,700 billion VND, equivalent to about 2 % of the total amount of state budget spent on education in the years of 2013-2017. Only in the school year of 2017-2018, Ho Chi Minh City raised around 1,455 billion VND from educational socialization. At the same time, Hanoi had 78 projects in the field of education and training that were socialized with a total amount of registered investment up to 5,600 billion VND. Similarly, a number of practical centers, laboratories, and teaching facilities of Hanoi University of Science and Technology, Hanoi University of Transport, Da Nang University, Hanoi National University, and Ho Chi Minh City National University were invested and supported by enterprises [3].

Informal private investment in education and training is the investments that are often beyond regulatory framework and controlling scope as well as management rights and usage functions of the state. In this respect, Vietnam is a relatively advantageous country with a tradition of fondness for learning and respect for honored coaching formed and...
developed over thousands of years throughout history. In 2009, up to 24.7 % of Vietnam’s population over 4 years of age participated in the national education system as learners [13, p. 33]. In 2018, Vietnam’s vocational education institutions recruited [14] 2,210,000 students and pupils [7]. In the school year of 2018-2019, Vietnam’s education system was home to more than 23.5 million of pupils and students [15].

However, these are only official figures that are clearly listed. In reality, the number of learners taking part in short-term and informal courses is much more than that. There is additionally a significant proportion of Vietnamese families investing in their children’s studying abroad. Vietnam sent annually a number of approximately 130,000 citizens to study overseas in about 50 countries and territories in the world. Of these, only one tenth is offered full scholarships, the remaining ones are self-funded overseas learners [16]. This trend of development is predicted to increase continuously and strongly in the near future.

All are part of the people’s total informal private investment resources for the country’s education and training activities. Apart from a small number of learners of state-funded institutions and courses such as educational institutions of Ministry for Security, Defence, Pedagogy, elective programs, scholarships, and completely free courses, most of these educational and training activities are a form of private investment of society. Therefore, informal investment in education and training activities is the widest range of investment activity. Nevertheless, this mode of investment is still insufficient from financial perspectives. The average sum of expense for a Vietnam’s current student is approximately 1,500 USD per year, accounting for roughly 70 % of the poorest families’ income and 30 % of the richest ones, but a compulsory minimum is 4,000 USD per year in the coming decade [1] in order to ensure the quality and effectiveness of training activities.

Foreign investment in Vietnam’s education and training usually takes place both by official road of the state and informal investment way of non-government organizations. The first one are grants and non.returned loans from foreign governments and international organizations for Vietnam’s education and training. In 2018, the Ministry of Education and Training was managing 10 programs and projects for the period of 2015-2020 with a total amount of 17,986,760 million VND [17]. The second one are scholarships and grants from countries and non-government organizations to train internationally qualified human resources for Vietnam. The most typical of these is the scholarship programs of Governments of Japan, Australia, and Korean Republic. Vietnam is annually and averagely provided with around 1,000-1,200 scholarships from different governments [11]. The third one are the informal investments carried out by bilateral cooperation programs of Vietnam’s non-government organizations and individuals with outsiders. The most noticeable of this is the investments in promising talents in academics, arts, and sports. The fourth one are joint training programs between Vietnam’s higher education institutions and foreign education institutions or international organizations in the world which are opened in Vietnam to directly serve increasing needs of human forces of localities according to contracts of involved parties. The fifth one are the foreign investments for business purposes in the field of education and training in Vietnam. Ho Chi Minh City is headquarter of 19 international schools and schools with foreign elements with a total number of 1,345 teachers, 10,799 pupils, including 5,080 Vietnamese ones [3]. As of December 31, 2015, Vietnam was home to only 1 foreign.invested vocational college [18, p. 46]. In 2017, 5 foreign-owned and foreign-invested universities were located in Vietnam [19]. Although international schools in Vietnam often have relatively high tuition fees compared to the average level of the entire national education system, training quality of this group is basically more assured.

In short, the entire state budget is contributed by citizens’ taxes. People taxes are part of the whole chain of value creation of society. State investment in education and training means essentially that the state is managing and using people’s contribution resources to invest in the national education and training on behalf of the people. For this reason, the more effective the investment is, the overall education quality of the nation will be upgraded. Meanwhile, although investment activities in Vietnam’s education and training from the outside is not always for the sake of immediately economic benefits, it is in essence to pursue one or some other basic targets that the most popular ones are often for profit. While foreign investment resources for Vietnam’s education and training are basically dependent deceptively on outsiders’ investment strategy and the question for Vietnamese is how to make full use of this objective investment resource in the most efficient way, domestic investment resources are entirely decided by the Vietnamese themselves. For this reason, the question is to find out the way and mode of investment in the most qualitative and efficient manner possible in the condition of currently limited resources.

B. Practical efficiency of Vietnam’s current system of educational and training institutions

In the context that the investment resources for education are still relatively limited in terms of total value, how to invest effectively is a question difficult to find accurate answers to all models of education and training. Therefore, this section only considers the quality and effectiveness of Vietnam’s investment resources in education and training in three main ways.

In terms of quantity, with an investment which is although relatively modest in the total value, accounts for a very significant proportion of the total state budget revenue as well as gross domestic product, Vietnam’s education and...
training has also achieved a number of respectful successes. One of the United Nation’s millennium goals is to achieve universal primary education around the world. In 2014, most Vietnamese children of primary school age attended school (97.9 %) [20, p. 11]. By 2017, Vietnam basically completed universal preschool education program for children under six years of age. Approximately 80.3 % of communal administrative units were recognized to eradicate illiteracy for children at level 2 aside from approximately 2.5 million of high school students and about 0.6 million of vocational high school students and professional high school students. However, the reality shows that there were still about 2.1 % of children of primary school age which were still unable to attend school. This number grows gradually until only 67 % of young people at the age of attending school graduated from high school [21]. Of these, girls were likely to attend upper secondary school more than boys [20, p. 11-12]. Simultaneously, Vietnam’s vocational education was showing more and more signs of prosperity. At the national high school graduation examination of 2018, out of 925,800 registered candidates, only 687,900 ones applied for admission to universities and colleges (74.3 %) [7]. The remaining preferred vocational training, studying abroad or labor export. On May 14, 2018, Vietnam Government issued Decision No. 522/QD-TTg with the goal that by 2020 Vietnam will have about 55 % of lower secondary schools and 60 % of high schools with vocational education programs associated with local production and business activities. However, several experts were concerned about the feasibility of this project [22]. In that context, higher education is basically a popular choice for most high school graduates, but training structure of higher education institutions is still a big question [19]. Concurrently, a significant number of learners have not been able to orient their future careers accurately and truthfully with their own capabilities as well as market demands. This fact questions the quality and effectiveness of Vietnam’s investment resources for national education system.

In terms of quality, there are several ways to assess the quality of investment resources for a nation’s education and training. However, one of the methods that most countries often prefer is to place the achieved results in relation to the goals that were originally set at the beginning. In this regard, Vietnam’s quality and effectiveness of investment in education vary considerably from each educational level to specific education sectors. Overall, Vietnam’s total number of 43,874 educational institutions in 2015 were directly operated by more than 1.24 million people, but until the school year of 2014-2015, only 16,276 schools reached national quality standards [23]. This number of teachers makes the ratio of learners to teachers of Vietnam improved significantly. In 2018, the ratio of children/kindergarten teachers of Vietnam was 17.2 (the world was 16.6), in elementary school was 19.6 (the world was 28.3), in lower secondary school was 16.4 (the world was 17.7), at high school level was 16.1 (the world was 17.7), at university and college level was 23.47 [6]. However, the quality of teaching staff has not been given enough attention. In 2017, only 16,514 (22.7 %) of Vietnam’s total number of 72,792 university and college lecturers earned doctoral degrees [19], while the whole country had 24,385 ones [6]. This fact proves that the quality of teaching staff has still been a big question [19]. As a result, Vietnam’s higher education system needs an addition of around 36,000 academic doctors [11] by 2025. By early 2019, Vietnam managed 1,948 vocational education institutions [8], but on 31 December 2016, there were 67,686 vocational teachers. Of which, the number of vocational teachers with postgraduate degrees was about 23.54 % (15,934 ones), university graduates 54.02 %, vocational secondary schools 8.37 % (5,668 ones), other degrees and certificates 14.06 % (9,519 people) [10, p. 58, 59]. Similarly, although the quality of Vietnam’s popular education (1-12 grades) was evaluated to be relevant to the quality standards of world education [24, p. 5-7], but only around 12 % of high school teachers reached graduate level in 2017 [25]. In terms of actual capacity, job opportunity, and labor productivity of learners, in spite of a very high literacy rate, the shortage of skilled human resources is a big problem of Vietnam. Although the proportion of students with jobs 12 months after graduation was 84 % [21], most were assessed to be substantially limited in their ability to think creatively, practice skills, and specific issues solving competency of practice. All are thought to be partly due to the unreasonable structure of spending on education and training which makes the quality of education [2] and training in some cases unable to meet job requirements.

Actual effectiveness, investment in education and training is one of the key factors contributing to the rapid and sustainable development of countries’ economies. The total created value of an economy depends on human, financial, and natural resources. People thus often play a central role in economic growth, while the level of awareness, knowledge ability, and soft power of education and training are also one of the main drivers contributing to the promotion of economic increase [2] of countries. The actual effectiveness of investment resources for education and training is therefore not only evaluated by immediately economic material benefits, but also viewed from several other sides, especially long-term strategic abstract impacts on the nation as a whole. On that basis, Vietnam’s quality and effectiveness of investment in education over the last few years need to be considered from different perspectives.

Overall, Vietnam’s investment resources for education and training has contributed to realizing the goal of improving people’s intellectual level, training human resources, and fostering talents for the country. However, if it is considered in terms of production capacity of the economy, Vietnam’s quality and efficiency of investment in education are insignificant. At the same time, although the proportion of Vietnam’s investment resources for education is relatively large, the proportion of trained labor force is still very low. By the first quarter of 2019, this rate was only 22.2 % [26]. This means that nearly 80 % of Vietnam’s labor force has never received any form of official vocational training [27]. With regard to income, attained results are very worrying. In 2016, the average income of wage workers was about 5.1
million VND per month. The more highly qualified the labor and the more practical the profession is, the greater the productivity and efficiency is [28].

Meanwhile, the imbalance in training structure at university level and the proportion of expenditure allocation for higher education lead to the shortage of high quality labor force in almost all fields of applied industry, information technology, and scientific technology. These are in reality all the key industrial production sectors and most decisive to development speed as well as sustainable capacity of Vietnam’s economy in the future. Considering this aspect, Vietnam’s structure of spending and investment in education is not really scientific and appropriate. This is actually one of the reasons for the situation that Vietnam’s human resource is evaluated as a surplus of untrained labor, but a lack of skilled labor [2].

While Vietnam has been considered as one of the countries with abundant and reasonable human resources, a number of industrial parks and export processing zones must import foreign skilled workers [2]. Meanwhile, in the first quarter of 2019, Vietnam had nearly 1.1 million unemployed [26]. A significant part of these was laborers with technical expertise [29, p. 52]. Part of reason for this is that opportunities of accessing to higher education as well as vocational education of Vietnam’s labor force is often relatively moderate [1]. However, the productivity and employment capacity of the economy are also partly responsible for this.

In this regard, by 2016, the average annual labor productivity of a Vietnamese worker was about 84.5 million VND (around 3,853 USD per labor) and each quarter generated approximately 21.1 million VND. If a person does not work for a year, the country’s GDP decreases not only the total amount of income that he generates, but also the resources invested for the worker. The higher the person with degree is, the greater the ability to create value is. The greater the number of professional people who are unable to find a job, the greater the total potential GDP value of the whole country decreases [28]. This fact is not only a waste of public investment resources of society, but also a constraint on the country’s development ability. Improving the quality and efficiency of investment in education is hence considered as one of the decisive solutions to nearly all related issues of Vietnam’s current education system [1].

In summary, although the actual capacity of the national economy is basically limited, both the government and people of Vietnam have dedicated their best to education. Nevertheless, the actual quality and effectiveness of the national education system are not really commensurate with potentials and expectations. The ability to meet learning needs of the people as well as increasing demands of labor market has not been as encouraging as it had been expected. A significant part of Vietnam’s labor force has not yet trained the most basic vocational skills, while an essential number of trained workers cannot find satisfactory jobs. Most of Vietnam’s high-quality human resources are usually trained abroad, while the national education system is annually invested around 20 % of the total official budget revenue [30], while unofficial investment resources are actually much bigger. For this reason, Vietnam’s productivity and quality of investment in education are in general currently an enormous challenge in the current context of extensively international integration [21].

C. Discussion and solution

The above analysis and comparison results show that investment in education is one of the top priorities of both the state and people of Vietnam. However, the gained effectiveness is very different in several aspects.

1) In the context that the overall potential of the economy is still largely restricted, spending around 20 % of total budget revenue for education is a great effort of Vietnam Government. However, non-state economic sectors have also recently been increasingly involved in education and training activities. The policy of prioritizing investment in education and socializing educational activities to attract non-public budget investment resources for human resource training and talent fostering is therefore reasonable. However, state budget should only be prioritized to focus on investing in some essential areas, but it is at the same time recommended to renovate the management model according to the autonomy mechanism for public educational institutions towards strengthening and broadening investment resources for this sector [12].

2) Vietnam’s education is currently a relatively attractive market for investors. The fact that non-public educational institutions have increasingly affirmed their role and position in the overall national education has proved that the total investment resources of society for education in Vietnam are extremely potential and open-widened. Simultaneously, the international education system in Vietnam has also flourished. This demonstrates that although being prioritized to invest substantially, Vietnam’s public school system is facing a number of questions from their own operation mechanism as well as increasing level of more fierce competition of non-public educational institutions. This competitive process is regretably indispensable in the context of market mechanism, but it should be noted that once the public school system has been prioritized by the state to invest, they have not yet reached their full potential, chances of success in the context of upcoming integration will be a big challenge.

3) The number of Vietnam’s students studying abroad has recently been increasing rapidly. The majority of these are self-funded overseas learners. The total investment capital for overseas study of Vietnamese is rising considerably,
while the age of Vietnam’s abroad studying students is younger and the level of education is also expanding very fast. That fact has made Vietnam become one of potential educational markets in the world. The question for Vietnam’s national education system is not only to continue attracting investment resources from the state, society, and outside, but also to have suitable solutions to compete in a fair way with foreign education institutions right on their own home soil. This is not a simple problem for Vietnam’s current education institutions, but basically there is no other option in the global game that Vietnam has voluntarily participated proactively.

4) In essence, Vietnamese invest in education not only to develop themselves, but also to improve overall human resource quality of the country. To a certain extent, Vietnam’s national education system has somewhat achieved the goals of improving people’s knowledge, training human resources, and fostering talents. Vietnam has never possessed a human resources which are as sizeable, qualitative, and increasingly approaching standard levels of Asia as well as the world as what she is having. Nevertheless, reforming the higher education finance mechanism is still an urgent question. However, the mechanism of allocating public resources for education should be based on principle of fair and healthy competition [12] in order to be able to improve the quality and enhance the effectiveness of investment resources for education in the coming years.

5) Vietnam is one of the countries with the highest proportion of social resources invested in education in the world. The total amount of time, effort, and budget that the Vietnamese invest in education is immense. However, the proportion of Vietnam’s trained workers is still fairly modest. The number of people leaving the country to look for career opportunities in other economies is also increasing quickly. Meanwhile, the number of Vietnam’s abroad studying students returning home is getting smaller. At the same time, labor productivity of Vietnamese is basically still a challenge. Limiting and redefining the relationship between resource investment priority policies and actual results achieved of education system is therefore an urgent issue not only for the future and destiny of educational institutions, but also of the country’s long-term development strategy.

In short, Vietnam is one of the countries with relatively large total investment resources for education. With the tradition of fondness for learning and respect for teachers established over thousands of historic years, Vietnamese often see education as one of the shortest possible routes for the future of each one as well as the whole nation. Based on the existing tradition and the increasingly urgent development needs of society, both Vietnamese officials and people attach great importance to prioritizing investment in education in a methodical and systematic manner, but the quality and effectiveness of investment are another story. The percentage of trained labor and labor productivity of Vietnam’s human resources is still a disadvantage. This fact shows that Vietnam’s quality and efficiency of investment in education are still not commensurate with potentials and expectations.

III. CONCLUSION

In conclusion, investing in education is a long-term strategic investment and has great expectations, because it focuses on one of the most fundamental issues of all time, the quality of human resources of all nation-states. Vietnam is one of the countries with the highest priority to focus all possible resources on education and training. Actually, Vietnam has also achieved a lot of respectful achievements in the area of education and training in terms of number and qualification. However, recently some pragmatic views claim that Vietnam’s investment in education in some cases is inefficient and leads to a waste of resources of learners themselves, their families, stakeholders, and society as a whole. The first manifestation of this problem is the redundancy of academic teachers and shortage of skilled workers that the whole society has recently been extremely worried. They all show that investing in education is a right strategy for both the state and people, but how to invest qualitatively and efficiently is a big matter of debate in the context of restricted resources. This fact raises several issues both in terms of Vietnam’s ducational philosophy and development philosophy in the future.

IV. REFERENCES


