

The awareness of knowledge Transfer Between SME's and TVET and its Impact on Business Performance in Rwanda

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Abstract: SME's and TVET, widely recognized as key elements of transformation driving countries competition and regional developments. Knowledge transfer has a real impact on today economies. SMEs has imposed its authority by improving quality of social life promoting jobs and boosting economies. In another hand both knowledge and practicability are needed and benefit for a conscience economy. In this respect the role of (TVET) Technical vocational education training is essential as it generate labor and boosting entrepreneurial initiative and supporting them with the accurate knowledge. University and colleges seem not to solve the problem of SMEs when it comes to knowledgeable labor. SMEs as a great initiative as well as very risky start-up are very dedicated at start. TVET development might be the great deal to respond to the technicality that lacks in SMEs most of the time affected by the lack of financial capability to afford professional. Follow by the lack of knowledge to put good ideas in practice. We can also argue that when knowledge move to the higher education, university or college it become expensive to higher and most of the times non effective. Small business and TVET will have in common more practical, technical and educational success history in creating opportunities while developing human capital to manage it. This paper explores the impact of knowledge transfer between the small & medium enterprise and technical & vocational education training through government development project. In sector like Health, trading, agriculture and manufacturing. This paper highlights the impact of knowledge transfer that has been applied in western countries and it impact on SME's business performance in Rwanda.

Definition of key terms:

No	Terms	Definition
1.	SME's	Small and medium enterprise
2.	TVET	Technical and vocational education Training
3.	POLICY	Course or principle adopted or proposed by an organization or individual
4.	WDA	Work development Authority
5.	IPRC	Integrated polytechnic Regional Center
6.	UNESCO	The United nations Educational, Scientific and Cultural Organization
7.	GDP	Gross Domestic product
8.	EAC	East African Countries

9.	MINEDUC	Ministry of Education
10.	AfDB	Africa Development Bank
11.	World Bank	Is An international financial Institution that provide loans & grants to government
12.	ERPRS	Economic development and Property reduction strategy
13.	URCE	University of Rwanda-College Education
14.	BTC	Belgium Development Agency

1. INTRODUCTION

1.1 Background of the Study

In order to support countries' economy growth focus have been place on developing SMEs and investing on education. UNESCO set as a mission to eradicate poverty and drive sustainability through education transformation (UNESCO, 2019). Both play an important role when it comes to business initiative, and entrepreneurs need knowledge based to successfully run their ideas. Knowledge transfer is conceived as the process in which ideas and experience once source to the other one vice versa. In education knowledge transfer is and ultimate goal of teaching, giving new knowledge to a specific audience on a specific topic. In business the topic has a broad reach as in mergers and acquisitions it looks into technology platform experience, market, corporate, culture, intellectual capital and competency in the global competition, unsuccessful knowledge transfer might face difficulties in leading in business ideas and creating values to the firms.(McCarthy and Aronson, 2017) There is a direct relationship between business and knowledge.

Amy.S. Con express in his book International business skill, ability and qualification. Resume company success on the ability of the organization their small or big enterprise to expose their staffs to the practical knowledge. (Amy, 2014) the knowledge economy definition is more accordance with this topic where the business needs to understand why their doing, what they do in knowing what they're doing to ensure innovation and creativity. In 2019 Rwanda have been announced as one of the faster growing country in Africa. SME's and TVET will play an important role in regressing the gap between employers and employees. This research is an observation research based on the current development project run in the district of Buguisera around SME's in agriculture, retails manufacturing sectors. (Matabaro, 2019)

1.2 Reason for this paper

Traditional education been recently criticize, the philosophy of producing new millions of graduates with a low impact on the society, universities and colleges are known to produce relevant among of intellectual in a competitive environment where actions only matter, on a gradually competition arena, the main concern of employers is focus on the capability, technicality and professionalism, for most of the jobs. In one n hand the problem is labor supply is not aligned with the economic growth or demand, the current system of education is set on a linear mass production whereby a huge majority of jobs are not trained or though in schools, in another hands. SMEs are just been promoted as economy booster, in Africa the number of SMEs supported by the government are just not significant when the market of demand and supply is still poorly described. In fact, the main problem in this research is to wake Rwanda to merge two of the most important areas of development at developing country to move out poverty and transform the economy. Transfer of knowledge between SMEs and TVET its problematic stand on the outcome impacting on the country economy and development in Rwanda.

1.3 Methodology

This paper is based on an analytical review of papers around opportunities that are building countries by investing on TVET education in one hand and in the other hand analytical review on the huge opportunity that offer SME's as well as their highlighted main issues. Based on a generic concept inspire by northern region like America and Europe linking so call the CTE in America context and the EPE in Europe context, technical and vocational training with growing industries, and entrepreneurs together creating a pool of knowledge beneficial for businesses. This paper is a generic concept to create an awareness among African leaders especially in Rwanda, based on a critical analysis of the observed importance to merge the two concepts; SME's ad TVET in order to create strong economic value and a mutual profitable growth.

2. TVET & SME'S IN RWANDA

In Rwanda both disciplines have a huge interest to the country economy as promoted by the government. The education industry starting from the general or public system have slow down the country emancipation. Any country that need to grow need to identify a focus area of economy in which it is going to excel, TVET been an abler by providing work force and expertise to industries, SME's as proven has provided more opportunities to employees as well as to employers.

2.1 SMES in Rwanda

Today Rwanda main concerned is to evaluate the vision 2020 with one of the main preoccupations on jobs creation and to reduce poverty. Objective which have not been achieve completely but we saw a good lay down of lucrative and innovative ideas for the past last years. This has been possible due to the highly collaboration between the government and the private sector. Putting together effort to strengthen small and medium enterprises. (Gamba, 2017) As a result, Rwanda SME's comprise approximately of 98% of business and employing around 41% of the private sector. Put together SME's, formal and informal business plays an important role in the country economy by emancipation its productivity and reducing trade imbalance. In Rwanda government have taken the lead by focusing of clustering strategy, firm coming together to share information, limit risk and reduce cost. Situation which have led to consolidate Rwandan economy to put a foundation against the globalization and international market domination.

2.1.1 SME's In Rwanda Status, Role and Attribution

Rwanda macroeconomic performance in 2019 show a GDP estimated higher than the regional growth at 8.7% with activities from services. At 7.6%, industry at 18% more specifically in construction with 30%. This was remarkably boost by public investment in services and infrastructure. Giving a GDP per capita up to 6.1%. High inflation in 2019 at 1.6% moved up by domestic demand, and domestic credit to private sector pick up from 0.9% to 21.1% GDP in 2019 because of the bank monetary policy. Although tax revenue grew stronger, the import remains higher than the export increasing the account deficit by 1.5%. The government intention to growth SME's to leverage the situation is real. (Africa Development Bank Group , 2019)

Small and medium enterprise in Rwanda make up to 98% of the total businesses, and are by fare one of the major employers with 41% of the private sector employment. SME's present then an opportunity to reduce poverty and reduce the trade imbalance, while building a strong record with knowledge development and knowledge transfer. SME's in Rwanda are basically form on family linear of doing things with traditional practices. (Francois Kanimba (Minister of Trade and industry), 2013) Unlikely like large firm system operation and means of realization. SME's have limited access to human capital, quick financial help, Energy, transport and market information process and analytical body to make use of information. The dependences of SME's on the traditional doing in Rwanda have been sein attached to the lack of institution that train and lead into industry practices and innovation.

SME's are found with similar issues or barrier to success around the world, particularly in Rwanda these are issues, which need to be tackled. In this topic by bringing SME's and TVET on the same platform it was to create an awareness, that one can create solutions. Rwanda economy have huge growth potential after as mentioned. SME's played the most important role but they're still struggling with issue that some can not deal with it require a system to understand and quickly decide on the country future steps. Many reviews, article and the Government reports, highlight the fact that skill is one of the barriers to SME's Success. The question in this research was how both SME's and TVET can come together and support each other. (Ndikubwimana, 2016)

2.1.2 Knowledge Transfer between SME's and TVET from the SME's angle.

SME's are normal organization that run on organization basic standard, which mean from a perspective of common practice of an organization structure, culture, SME's can set itself up to the expectation. Small and big organization are all facing profitability, competition and innovation issues. It is clear that small organization have the characteristic to be there less longer than the big one. Just to say that experience will make a difference on the way both organizations will be running. Small enterprise has the chance to be in a small group, where by the communication can be much easier and lesser among of task. (Saina, Mukwa and Kyalo, 2018) All companies' formation all start with ideas, people, capital and functionality. Moving forward SME's main issues today were realized on the human capital capacity this can be

understand due to the pay difference. They can afford professional and tend to depend on the government help to be guided. Same goes with capital even when given money SME's found management tend not to meet the expectation at the end.

Looking at opportunities created by SME's and their location there are similarities between they way of operation and TVET. Once carry the solution of another for instance, in Germany, the system realized that technical and vocational education fit well between SME's and TVET. Couple of SME's that need labor intensive or specific labor can be found trough TVET. Along with the necessary training that is needed to master the knowledge needed and innovate on the specific area. Solving the crucial problem of knowledgeable worker, in the industry. (Ramadan and Xiaohui, 2019) This initiative is well managed with the government follow up to fit where needed hands to bring up the quality and expertise around industry is. More over fixing the very important problem of cheap labor that SME' s needs to support their activities. In this process of exchange there is a high expectation of innovation. Justify by the implication of young by stimulating their interest on particular activities.

2.2 TVET in Rwanda National Context

On it own TVET is a global term that simply concerned the acquisition of knowledge and skill. It was best defined after Seoul 1999 summit in a more comprehensive term, as Technical and Vocational Education and Training. Actually, the term stand for formal, non-formal and informal training provided by different institution. Rwanda population was expected to grow at 14 million in 2020, with a 67%, under 25 years old. 85% of them living in the rural area and 95% working in farms. A recent study has shown that about 170 000 with no qualification are starting working each year with no qualification. Only 50 000 are currently under TVET program. TVET program is delivered by both public and private. Moore 50 schools are offering industrial and technical courses. Girls attendance a 22.5% in 16 disciplines. 146 schools are offering technical and professional education. 100 schools on accountancy and management, which have the biggest number of enrolled as well as 68% of them been female students. Finally, 25 schools in agriculture, veterinary schools. TVET in Rwanda as all over the world have been indicated to be the problem solver for economic and social development emphasis on people working, learning skills and long-life promotion. (Minister of Education Rwanda, 2015)

A significant interest has been placed on Technical and vocation training education in Rwanda. In 2008 the government did reform the TVET sector into Work force development authority (WDA) & Integrated Polytechnic regional centers (IPRCs) The competence-based education system approach applies in the TVET in Rwanda as a performance reference adopter from the Belgium approach, set guideline through a curriculum development and teacher training. In many African country TVET comes in option to stimulate the economy growth, by creating man power, knowledgeable human capital, the technical and vocational education training is more in line to cover the huge market demands of qualified workers in some sector. Although this focus is still running on a narrow scale and cover only basic economic sectors. The world bank skill program has brought as well a significant improvement in this type of environment TVET will have a better impact on the economy. (Minecom, 2020)

2.2.1 TVET Policy in Rwanda and Objectives

TVET Rwanda in 2015 have urge to a revision of its previous policy dated from 2008, this to meet TVET obligation for the next five years to come. This was set to ensure a clear direction and a supporting framework for all involve in the process. The need to reassess comes with reason like, to enable effectiveness and high quality, through identification of basic and important market, applying new policies related to environment, country education and development. Poverty reduction strategy and the national employment program. The national gender focusing on girl's education. Behind all the great need to create employability skills. And the establishment of Rwandan framework.(The World Bank, 2016)

This policy objectives are resumed to, a number of unmatched systematic and institutional. 2015 policy, will improve understanding of skill needed in prime sectors. Moving forward the vision 2020. A consideration of action in regards to the limitation of skill shortage in priority sectors. To improve the horizontal and vertical pathways, seen in the lack of a specific qualification body for TVET education. Also, staff shortage and skill upgrade, to develop human capital withing TVET system. These objectives seeking as well to create a strong collaboration between TVET and relevant institute. For instance, increasing the number of partnership and create a sustainable improvement of provision as well as the industry in which they are linkage. Finally addressing the problem of budget which lead to facilities, as many other African

country, access to skill main obstruction are the availability of tools, infrastructure that permit a conducive learning environment. (George Afeti, 2018)

2.2.2 Issues faced by TVET in Rwanda

The government ambition to meet 150 000 young employment per year is found not achievable so far TVET, amendment, planification and implementation since 2015 still behind the target. Many problem or issues are been found at the origin of this failure. Although the government have place sufficient found by increasing the budget. Getting more intension and connecting the goal to an international approach and platform. The reality on the ground speak by itself. TVET technicality when it comes to implementation of the whole process. Planning organization and supporting institution, found and qualify personnel to handle the project. (Woocheol Kim and Heh Youn Shin, 2019)

More over the identification of the real potential of Rwandan economy and sufficient fund attribution for it emancipation, is a problem on it own the issue of diversification of subjects make TVET in Rwanda depend on a traditional economy system, mainly dominated by Agriculture with low pay jobs when the world have turn into a more dynamic and globalize economy. Industry 4.0 is the bigger threat. Digitalization and internet of things, bigdata and cloud computer are not integrated in the system. Mainly because of the lack of qualified personnel to carry of the named subject.

The biggest discuss point today is gender equality as a back up to country economy stability in Rwanda woman empowerment is not new. The international scene has placed the country as number one in the world when it comes to woman seating in the lower house of Rwanda's national legislature, up to 64% compare to Sweden at 44% and America at 19%. (Connolly, 2019) TVET Rwanda have recorded only 20% of the last recorded graduate were female, this number are mostly generated from a management, accounting and finance. Very low percentage on technical or engineering programs. The issue of gender equality seems to be hank in the people mentality. This problem comes to reduce the effort of the government and need to be specially tackle for a successful TVET program. (Nkurunziza, 2019)

TVET supporting institution are still lacking in term of facilities or qualified trainers, one of the major problem is due to the government plan for an economic development to lead in by first of all developing programs according to needs and gap in the industry or sectors that are lacking in quality labors in Rwanda. For instance a law was voted around ten years ago to officially open in Kigali an institution that will trained profession accountant such initiative had transform the professional accountants portfolio. (Innocent Nsegiyumva, 2020) Which was largely depend to Kenya and other country supply...Secondly the need to open a collaboration with develop countries on educational program that will take local interested to be trained in a foreign country. TVET as an institution required a very closely observation and monitoring even more than the normal education systems. Statistic shows that more 80% of students after graduating from local university do not respond to the demand of employment many study standard programs as economic, law, politics, history, mathematic. Or businesses. Weakening the country economic development. (Samuel Macharia, 2020)

3. SME'S & TVET KNOWLEDGE TRANSFER APPROACH

On Education, Technical and Vocational Education, can bring a brighter future to the next generation. By identifying the society need, the world economy growth factors, transfer of knowledge between SME's and TVET can be a support based on a structure economic system based highly knowledgeable actors, for example in America the government have manage to trained and create entrepreneur on new fields boost the created of new industries. Support which is mostly appreciated by the private sector contribution to help multiply the qualified worker to better serve the market. In fact, here they use SME's platform to trained a labor force while educating them. (Sharma, 2017)

Labor Force supply to slow industry. The shortage of human capital in Rwanda is the main raison why many international firms can come into the country. One of the ways of address it is to exchange knowledge between SME's who are lacking of man power and lacking of means to afford them, and the Technical and vocation education who has lot of hands without a proper skill. In Germany in the construction area, after achieving a project at the international standard without qualification worker are giving a certificate of Master if the project was ringing or giving a price. This approach through practice and realization non-qualified people graduate from project and have the knowledge for others to come. The same approach can provide staff to run TVET system.(Bahl and Dietzen, 2019)

The statistics shows that 99% of the big companies today were small and medium enterprises. What are the challenges faced at the time and how to overcome those challenges? The main point here is to highlight the opportunity behind an integrated TVET -SME's working close to fit the Gab between knowledge economy and qualified worker, the majority of failure comes from the lack of expertise in SME's, in technical and vocational education the problem is on the exposure of students to their respective industry and qualify lecture with enough exposure, experience and up to date. Both industries are on the beginner stage and potential can be share and leveraging the cost on facilities, affordability, and on market access. Activities that will definitely create better opportunity for the country and expend the business scope. (Singh, 1998)

Based on a long observation on the Rwandan economic, leveraging SMEs will bring consistent change in the way Rwandan do business. Why is it crucial and how can it be done? The system of education bring out the best production in term of knowledge, innovation and creativity. One of the way to achieve this, is to look in primary business that are good potential to Rwandan economic according to the data shows on exports index, for example coffee, tea and some minerals and move on with special programs on agriculture, transformation, packaging and commercialization by incorporating TVET in that process the country can realized based on the high demands of those products derive from coffee, tea and minerals an uncontestable market that will have an impact at the international level and even in the local region. Mainly at core to such activities the transfer of knowledge between SMEs and TVET.

4. SME'S AND TVET CROSS CUTTING ISSUES

Developing country have been victimize with a couple of issues that have participated on the slow of their economy emancipation. Common issues like poor technology, poor infrastructure AID/HIV, analphabetism, woman empowerment and all sort of conflict leading to extreme poverty. Marty Rubin say ' ' In matters of the heart struggle is less effective than doing nothing.' ' Best believe that the appropriate practicality of these two terms can best act on the effort to free Africa from its current detraction. (George Afeti, 2018)

Knowledge transfer between SME's TVET can leverage the gape on infrastructure. Rwandan government goal is to improve the country infrastructure. This will stimulate country economic growth, improving logistic system, roads and energy supplies. On ICT, the national information and communication infrastructure consist to equip Rwanda with sufficient knowledge and ability into information technology literate nation. The support of education in these objectives will bring about sufficient man power through TVET institution, with diversify learning approach. Conductive to creativity in new area of start up and enterprise formation, supporting and maintain the country economic cap. (Robertson, 2003)

In the area of health and prevention TVET center can easily promote medical courses in relationship with SME's to tackle, malaria, HIV/AIDS issue trough small a medium enterprise initiative training youth inn healthcare and empowering them to act in rural areas. By pushing this knowledge on prevention activities, treatment, modern and traditional medication alternative. This will lower down the sigma and discrimination for example, toward people leaving with HIV/AIDS. Promote voluntary counselling, businesses, learners and administrative staff to tackle the issue.

Agriculture might be the easiest way of coming of poverty but in the African contest is still to far and not up to create enough jobs for the whole continent. Looking at Rwanda, the land distribution and the growing population. Agri-tech is the way forward. TVET in Agri-Tech will leverage the level of the industry and create a competitive platform in the region. Agri business have a strong potential in and out of the country knowledge transfer will attract investment and sustain the sector. On Environmental protection Education is the best way to communicate and shape behavior toward nature, deforestation and use of chemical. (Tee *et al.*, 2013)

Business environment and entrepreneurship, gender parity is motivated by traditional believe of stigma, TVET recruitment procedure in relationship wit SME's development can shape and oriented the distribution of the country labor needs where is necessary cutting down the unemployment rate to certain jobs removing the limitation attributed to only man on certain jobs. TVET and SME's effort need to be oriented in encouraging girls to join certain career one by training and the other one by employing them. This is one of the benefits of the transfer of Knowledge between TVET and SME's extending girls education and careers in current fields like ICT, Mechanic, Electronic, construction and Architecture. (Mccoy, 2017)

5. CONCLUSION

All over the world TVET Technical and Vocational Training and Education is an uncontested route to emancipate drop out school into highly skilled and the next ready workforce. But generally, it is a misconception to cot TVET to the dungeon, those with lower career prospects. The reality shows that TVET graduated have a better career opportunity, like higher rate of employability, self-employed, business owner debouches. That is the reason why government are objecting to increase and diversify the area. SME's was found at the basic level of country economy. (Saina, Mukwa and Kyalo, 2018) Its success can be analyzed from the outcome from Japan, Germany, and America economy index and the contribution to the overall employment. In Rwanda SME's and TVET seems to be given the same trajectory it will be not realistic to see that both areas are ultimately related. Been the engine of the country economy, education and business will have more to provide if their role and application anticipated. Knowledge economy have taken advantage in globalization, its particularity been centralized on mastering the know how and leading on it. Korea have not invested on it own natural resource as they have nothing compare to Russia. This has to be taken as a case study for future initiative in Rwanda projection and like those successful country in the similar position Rwanda can sharpen its projection and always thinking on doing better than what have been accomplished.

REFERENCES

- [1] Africa Development Bank Group . (2019). *Rwanda Economic Outlook* . Retrieved from /www.afdb.org: <https://www.afdb.org/en/countries/east-africa/rwanda/rwanda-economic-outlook>
- [2] Matabaro, R. N. (2019). Effect of external debt on economic growth of rwanda. *Indian Journals* , 47.
- [3] Minecom. (2020). Industry and Entrepreneurship Development. *Minecom.com*, 1.
- [4] Nkurunziza, M. (2019). Govt seeks Rwf100bn for TVET. *The New Times Rwanda* , 1.
- [5] Robertson, P. L. (2003). The role of training and skilled labour in the success of SMEs in developing economies. *Emerald*, 473.
- [6] Sharma, J. (2017). Quality TVET for Matching Needs of the Industry. *IGI Gopal Publishing* , 25.
- [7] Bahl, A. and Dietzen, A. (2019) *Work-based Learning as a Pathway to Competence-based Education A UNEVOC Network Contribution VOC ATIONAL EDUC ATION AND TR AINING REP ORTS UNEVOC Network*. 1st edn. Leverkusen: federal institute of vocational education and training . Available at: <http://dnb.ddb.de> (Accessed: 13 March 2020).
- [8] Connolly, S. (2019) *The Parliament Paradox: Rwanda as a Case Against Composite Gender Indices*. Middletown . Available at: https://wescholar.wesleyan.edu/cgi/viewcontent.cgi?article=3153&context=etd_hon_theses (Accessed: 11 March 2020).
- [9] Francois Kanimba (Minister of Trade and industry) (2013) *SMEs PRODUCT CLUSTERS IN RWANDA*. Available at: http://www.minicom.gov.rw/fileadmin/minicom_publications/Reports/minicom_smes_product_clusters_booklet.pdf (Accessed: 5 February 2020).
- [10] Gamba, F. J. (2017) 'SOCIAL CAPITAL IN SELECTED BUSINESS ASSOCIATIONS OF FOOD PROCESSING SMES IN TANZANIA AND RWANDA: A SYNTHETIC BASED APPROACH', *International Journal of Asian Social Science*, 7(1), pp. 2226–5139. doi: 10.18488/journal.1/2017.7.1/1.1.63.84.
- [11] George Afeti (2018) 'Revitalising technical and vocational education and training in Africa: Issues outstanding', *Journal of Vocational, Adult and Continuing Education and Training*, 1(Crisis on youth unemployment), p. 8. doi: 10.14426/jovacet.v1i1.298.
- [12] Mccarthy, L. and Aronson, R. (2017) *Success Stories in Knowledge Management Systems, Issues in Information Systems*. Available at: <https://commons.erau.edu/cgi/viewcontent.cgi?article=1635&context=publication> (Accessed: 13 March 2020).
- [13] Mccoy, R. (2017) *World View of Women in Leadership-A Discussion of Global Gender Parity in Business and Government with a Review and Recommendations of Improvement Opportunities*.

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- [14] Minister of Education Rwanda (2015) 'TVET POLICY', p. 13. Available at: https://mineduc.gov.rw/fileadmin/user_upload/pdf_files/TVET_Policy_Final.pdf (Accessed: 9 March 2020).
- [15] Ndikubwimana, P. (2016) 'The Role of Financial Institutions in Promoting Innovation of SMEs in Rwanda: An Empirical Review', *British Journal of Economics, Management & Trade*, pp. 1–14. Available at: <http://www.journaljemt.com/index.php/JEMT/article/view/12577> (Accessed: 13 March 2020).
- [16] Ramadan, A. and Xiaohui, C. (2019) 'Challenges and Opportunities of TVET in Developing Countries: A Case of Sudan ICT integration on Technical and Vocational Education and Training (TVET) system in Sudan View project ICT Integration in Technical and Vocational Education and Training (TVET) System in Sudan View project Challenges and Opportunities of TVET in Developing Countries: A Case of Sudan', 9(10). doi: 10.7176/DCS/9-10-09.
- [17] Saina, A. K., Mukwa, P. C. and Kyalo, P. M. (2018) 'TVET in Driving Sustainable Development: Strategies for Mitigating Challenges Associated with the Integration of ICT in Instruction of Engineering Subjects', *Africa Journal of Technical and Vocational Education and Training*, 3(1), pp. 229–237. Available at: <https://afritvetjournal.org/index.php/Afritvet/article/view/75> (Accessed: 13 March 2020).
- [18] Singh, M. (1998) *UMW smidd Iff International Project on Technical and Vocational Education Projet international pour l'enseignement technique et professionnel School Enterprises: Combining Vocational Learning with Production*. Berlin. Available at: <http://www.unevoc.de> (Accessed: 13 March 2020).
- [19] Tee, T. *et al.* (2013) 'The Development and Evaluation of The Qualities of Thinking Skills Module', *Journal of Technical Education and Training (JTET)*, 5(1), pp. 52–67.
- [20] The World Bank (2016) *The World Bank*. Available at: <http://documents.worldbank.org/curated/en/212731480957725928/pdf/ICR-Main-Document-P118101-2016-11-29-19-34-11302016.pdf> (Accessed: 13 March 2020).
- [21] Woocheol Kim and Heh Youn Shin (2019) *FURTHER TRAINING NEEDS FOR TVET TRAINERS: LESSONS FROM A NATIONAL SURVEY ON RWANDAN TVET TRAINERS' INSTRUCTIONAL COMPETENCIES* | *Journal of Technical Education and Training*. Available at: <https://publisher.uthm.edu.my/ojs/index.php/JTET/article/view/3604> (Accessed: 13 March 2020).