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Organizing Iranian Vocational and Technical Educational Universities with Land Preparation Approach

Niusha Akbari[1], Mehdi Rafiei[2]

[1]Master of regional planning, Islamic Azad University, Qazvin branch
[2]PHD student of management, vocational and technical university

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ABSTRACT

Organizing vocational and technical educational universities in Iran with land preparation approach is the subject of this article which its main purpose is balanced development of each region based on their potentials. In this study, using methods and models for regional planning, some assumptions are tested as follows: Technical and vocational educational universities in the country, according to the basic theory of province development in land preparation has not developed according to local needs; and also they has not developed fairly. The results of the above assumptions show that despite the high demand for vocational and technical education, the vocational and technical education centers all over the country are distributed unprepared to local needs because of lacking longtime plans and strategies. Lack of fairness in the distribution of vocational and technical education centers and the capacities of these centers are caused too many movements all over the country to access educational opportunities.

KEYWORDS: organizing, vocational and technical educational universities, land preparation, justice

INTRODUCTION

Countries with young population need to develop educational universities for the development of human resource. Further development of these universities facilitates human resource development programs at national level as well as regional and local development impacts.

The new style of school in Iran was established By Amir Kabir entitled the first polytechnic school in 1908. After that several schools such as agriculture, commerce, Handicrafts industry, and art industrial schools were established in Tehran which had technical and vocational approach. Furthermore, the first high education universities such as Narmak High School, Nafisi Technique and Tehran poly-technique schools were established by scientific-practical approach and faced with ups and downs. Currently, technical and vocational education is provided both formally and informally.

In today's world, the most of important impacts of technical and vocational education can be outlined as follows:

•Technical and vocational education and skills training is effective in rapid economic growth.
• Technical and vocational education is very important in knowledge orientated development.
• Technical and vocational education and skills training lead to substantiation of human security and social justice.
• Technical and vocational education and skills training lead to a cultural development.
• Technical training and vocational development lead to improvement of occupational workforce hierarchy, Empowerment of workforce and supplying human capital.

The equal opportunities in accessing technical and vocational education and skill training are a solution to create the context of growing and ascendancy for the society.

Development of these kinds of educations lead to increase society's empowerment and facilitate accessing to resource and opportunities as well as increasing trust and substantiation of human security and social justice.

Technical and vocational schools prepare divers people for the arrival to work world. These trainings can transfer demanded skills and competencies, respond to the changing needs of market and provide equal opportunities for all persons in the public and private sectors. This can reduce production costs and create the strength for competition in the global markets.

This type of training as one of the bases of sustainable development is accepted and emphasized by international organizations such as UNESCO and Univac. Regarding to the report of UNESCO in sustainable development International Conference of Paris and Seoul, human beings are centers of development via technical and vocational education.

In other words, technical and vocational educations increase human, social, physical and financial capital and this increase will lead to the political, economic, social, cultural sustainable development which can cause technical and vocational education development.

One of the limiting issues of regional development is the labor movement in under developed areas. According to the of year 2006 Population and housing Census documented in strategic policy and guideline- the strategy of

*** Corresponding Author:** Niusha Akbari, Master of regional planning, Islamic Azad University, Qazvin branch.
Email: newsha.akbari@gmail.com

geographical expansion of health high education in the Islamic Republic of Iran(prepared by the Ministry of Health, therapy and Medical Education in June, 2012), in only one decade(1996 to 2006), 16.7 percent of the population(over 12 million people)have been moved inside the country which has shown 2.7 percent increase regarding to its past decade 1986-1996.Studieshave shown that the main reason of migration within the country is accessing to job opportunities, while the main reason for elite migration is accessing to educational opportunities. Between 1996 to 2006 more than a millennium migrants have been done only in order to access to educational opportunities.

Several studies have demonstrated that elite internal migration (generally from less developed are as to developed areas) will adversely affect the development of their hometowns and cause social injuries. Now, according to the descriptions, it is time to look into this issue specifically and provide the suitable context for organizing higher education centers with focus on technical and vocational education institutes. Therefore, this study pursues the following questions:

•Which model is suitable for the development of Technical and vocational education institutes to prevent the migration of localities?

•which fields and grades should be considered to provide the country's needs and achieve the visions, goals, strategy plans, and especially land preparation studies.

METHODOLOGY

The research method applied in this study is analytical descriptive method and correlation. Using methods and models of regional planning, the data have been evaluated.

1-taxonomic Model

analysis Techniques of numerical taxonomy is per formed in several steps as follows:

•identifying areas for evaluation of development level and determining development indicators
•crating the data matrix
•standardization of indicators
•Determine the composed distance between the areas
•Determine the shortest distance
•homogenization of the regions
•the model or paradigm of regions
•grading of development level of the areas
•Analysis of the results and determine the quality of development

To analyze the data in a taxonomy model the statistical indexes is used.

A-percentage of local registered students to total registered students in technical and vocational institutes of each region.

B–the ratio of local applicants of technical and vocational institutes (actual demand) to the admissions capacity (actual capacity)

C-number of local students per 100square kilometers of area

D-number of technical and vocationalfieldsper10,000activepopulation(employed and unemployed population)

E-percentage of students in technical and vocational universities to education age in each region,

F-Fitness of infrastructures to the demand amount in each region can be studied using the following criteria:

•Education net space per capita (the ratio of net space to students)
•the ratio of net space to the number of applicants in each area
•the ratio of scientific staff to the students in each area

2–Place coefficient model

What reveals the role of the region is understanding of the relationship between basic and non-basic economy. In this method, the economic base of the region is recognized as the main part of economy and its share in production and employment are studied. Indeed, by comparing the ratio of employed of an economic segment of each region to the total employed of that region, and by the ratio of employed of that segment in the country to the total employed, the competitive advantages in each economic segment is determined.

3- The procedure of assessing and investigating of Equality of accessing educational opportunities

For assessing inequality in educational opportunities between the provinces quantitative indicators of UNESCO has been used.

First, using a selection index, we classified the country areas; for doing that a number or numbers are rewarded to each location as the beneficial amount of using educational opportunities, which show the percentage ratio students of technical and vocational institutes to population percentage of each location.

Selection index of "one" means the appropriate share of location regarding to its population and "top one" indicator means that the educational opportunities of each area are more than its population.
This study is done regarding to nine divisions approved by government in February of 2010[1]. These areas are as follows:

1 - North Coast Region: Gillan, Mazndran and golestan,
2 - Azerbaijan regions: East Azerbaijan, West Azerbaijan and Ardabil,
3 - Zagros region: Hamadan, Kermanshah, Kurdistan, Lorestan and Ilam,
4 - Khuzestan Region: Khuzestan and Kohkilooye and Boyer Ahmad,
5 - Persian Region: Fars and Bushehr,
6 - Southern Alborz region: Tehran, Central, Semnan, Qom, Qazvin, and Alborz,
7 - Central Region: Esfahan, Yazd and Chahar Mahalo Bakhtiari,
8 - Southeast Region: Kerman, Sistan and Baluchestan, and Hormozgan,
9 - Khorasan region: South, Razavi and Northern Khorasan

Table 1. Proposals investigation of the basic theory of development for different areas of the country

Regions	Proposals
North Coast Region	Agricultural, tourism development and using industrial and commercial capabilities
Azerbaijan region	Agricultural, industrial, mining and commercial development
Zagros region	Agricultural, industrial, mining, tourism and barrier commercial development
Khuzestan Region	Agricultural, ranching, heavy industries, oil and international commercial development
Persian Region	Oil industry, gas industry, service sector, Fishery , agricultural, high tech industries, tourism development
Southern Alborz region	Managing of developing process and the relationships, development of professional scientific technical issues, high tech industries, evolve chain, agricultural and its service, tourism, high education, mining, commercial capability development
Central Region	Multi dimension and balanced development of economy, international interaction share, mining, high service, commercial, tourism, agriculture development
Southeast Region	Mining, agriculture , tourism, commercial and Fishery development
Khorasan region	Utilizing geographic and cultural situation for international interactions by tourism, industrial, agriculture, service, transportation development
References: land preparation studies	

In this study the suggestions of national development theory as an upper document are considered.

Findings

In this section, using the methods and models of planning, the statistics analysis has been done.
After the taxonomy model assessment, all the regions in terms of development in technical and vocational education have been classified as follows. In such a way, in this classification, the south Alborz region is the first and the Zagros region is the last in the ranking.

Table2. Hierarchy of development rank of technical and vocational education

Quality of development	Degree of development	regions	Development rank
Have high facilities	0.5	Southern Alborz region	**1**
	0.6	Khorasan region	**2**
	0.6	Central Region	**3**
Have limited facilities	0.7	Azerbaijan region	**4**
	0.7	Persian Region	**5**
	0.8	North Coast Region	**6**
	0.8	Zagros region	**7**
Lack of facilities	0.9	Khuzestan Region	**8**
	0.9	Southern Alborz region	**9**

Investigation of technical and vocational education fields indicates that the fields of technical and vocational education in many cases are incompatible with regional potential. As this kind of education is expensive it should be compatible with the needs of workforce in market. On this basis providing the balanced development planning document for technical and vocational education is required. In order to provide this document based on land preparation, each province should codify its own document in terms of its needs. On the other hand, in order to create more proportion between fields and job market, Technical and vocational education institutes should be entrepreneur. In this case the duty of university is not only teaching and researching, but also the University should support the student until the end. It should notice if the output of university is useful for the work market.

[1]Interview of managers' message with Dr. Azimi about physical national plan, www. anthropology.ir

Table 3. Comparative advantage of country's areas

Khorasan region	Southeast Region	Central Region	Southern Alborz region	Persian Region	Khuzestan Region	Zagros region	Azerbaijan region	North Coast Region	Regions / performance
									agriculture
									industry
									service
References: statistic data of census 2011 gained from statistic center of Iran									

Table 4. Proportionality of vocational and technical fields with the potential of the regions of the country.

Proportionality of the field of study and region's potencials			Share of each field of study			Regions
High Proportionality	Medium Proportionality	Low Proportionality	service	industry	agriculture	
			25	61	14	Azerbaijan region
			44	56	0	Zagros region
			24	74	2	Central Region
			26	64	10	Southeast Region
			20	71	8	Khorasan region
			31	57	12	North Coast Region
			35	50	15	Khuzestan Region
			28	56	16	Persian Region
			29	48	17	Southern Alborz region
Reference: Statistic information of registered students in 91-92 in technical and vocational education universities						

Investigation of technical and vocational training opportunities suggests that all of the regions of the country have low chance to access regarding to their population age.

Table 5. investigation of Access to education opportunity

Education opportunity	Students of technical and vocational education	Population in education age (15-19 years old)	population	Regions
0.4	23586	65373	7331831	North Coast Region
0.1	15845	100264	8053684	Azerbaijan region
0.2	18028	79934	7508982	Zagros region
0.3	8243	35342	5190349	Khuzestan Region
0.4	13030	45735	5629607	Persian Region
0.0	32120	948152	20010052	Southern Alborz region
0.5	24610	58139	6849003	Central Region
0.2	14876	70566	7051498	Southeast Region
0.2	18061	102828	7524663	Khorasan region
References: statistic data of census 2011 gained from statistic center of Iran, Statistic information of registered students in 91-92 in technical and vocational education universities				

On the other way, discussing gender equality in technical and vocational education in order to determine perceived Justice in the country is important. Check the status of various areas of the country indicates that gender equality in order to access to technical and vocational education opportunities has not been adhered in any of the regions.

Table 6. Investigation of genders' access to technical and vocational education opportunities

Female admission percentage	Male admission percentage	Regions
%26	%74	**North Coast Region**
%38	%62	**Azerbaijan region**
%35	%65	**Zagros region**
%29	%71	**Khuzestan Region**
%33	%67	**Persian Region**
%41	%59	**Southern Alborz region**
%32	%68	**Central Region**
%22	%78	**Southeast Region**
%25	%75	**Khorasan region**
Reference: Statistic information of registered students in 91-92 in technical and vocational education universities		

Also comparing the capacity of the vocational and technical Universities to the number of applicants indicates that they are not compatible. The necessity of considering the educational justice in society and also meeting the regional demands require increasing the capacity of application in these centers. The number of

demands in each province can be a proper guideline for the capacity of admission in these centers. On the other hand, handling the regional demands with existence educational space is not available. The amount of space needed for each faculty regarding to its different fields, obtain from multiplication of suggested capacity per capita for each field in number of applicants.

Table 7. the status of student in nine region

Local applicants	Khorasan region	Southeast Region	Central Region	Southern Alborz region	Persian Region	Khuzestan Region	Zagros region	North Coast Region	Azerbaijan region	regions
15889	207	160	309	1186	88	82	315	797	12745	Azerbaijan region
14955	291	138	180	747	42	23	40	13292	202	North Coast Region
26114	316	421	948	2237	240	436	15782	4685	1049	Zagros region
9769	143	452	741	280	608	6749	340	372	84	Khuzestan Region
13739	224	1672	1047	740	9097	507	110	231	111	Persian Region
32629	713	277	1996	23208	347	37	990	4191	870	Southern Alborz region
21783	264	270	18098	1170	856	327	267	451	80	Central Region
10176	169	8998	476	183	157	22	14	134	23	Southeast Region
18057	15607	667	464	775	81	19	30	342	72	Khorasan region
163111	17934	13055	24259	30526	11516	8202	17888	24495	15236	Admission capacity
Reference: Statistic information of registered students in 91-92 in technical and vocational education universities										

Table 8. proposed space per capita for technical and vocational fields

minimum per capita net space for a student (Square meters)	Education fields	No.
5.3	automechanic, agricultural machinery, transportation	**1**
5	facilities	**2**
4.6	metal industry, textile, electricity, wood(except mosaic and inlay)	**3**
4.3	welding industries, mechanical, food industry and other jobs(except ones that need extensive workshop facilities)	**4**
2.5	Information technology	**5**
3.4	electronics, telecommunications, chemical, biotechnology	**6**
3.1	Wood(mosaic and inlay)	**7**
4	Food industry	**8**
2.8	civil(drawing), tourism, hospitality, design and sewing, agriculture	**9**
2.5	administrative, financial, commercial, educational services, management and industries	**10**
4	Mining, firefighting, civil (ones that need extensive workshop facilities)), agriculture	**11**
5	handicrafts	**12**

Conclusion

Today the serious crisis in higher education is that the university courses are not practical. This has brought another challenging issue about increase of graduated unemployment students who neither what was learned suitable for working nor they are willing to work in different jobs with their fields of study.

Focusing on Theorical learning makes our educational systems take away from job market and many of even technical and vocational universities cannot train society in order to have a positive effect on the economy. Therefore, the kinds of education should be transfer to the students which can help them using it after graduation.

In an educational system that the capacities of bachelor and associate degrees are not filled, the competition for entry into technical and professional universities is extreme. Many students, who graduated from high schools, will meet the entrance exam as a difficult barrier because the ratio of applicants has not a logical relationship with the ratio of student acceptance.

Elite students of technical and vocational universities who have great inventions are not successful in entrance exam. Therefore, a special portion in entrance exam should be allocated to vocational and technical education's students.

Noting to that the majority of the students graduated from technical and vocational college classes don't have enough capital to start a business related to their course of study, While most of technical and vocational courses need a large amount of capital to self-employment and benefit making.

Therefore students of technical and vocational universities need a wide support for their corporative institutes for producing and marketing. Furthermore this support can create self-employment and benefit making for graduate students and also provide benefits for the Universities to prepare its Equipment's.

Supporting of trained technicians by the government and allocating some production licenses to technicians, graduated can more easily find a proper job.

Technical and Vocational education universities should be product-orientation so the trainings should be planned in such a way that even in free times, the students move forward to deepen their knowledge. On the other hand, in order to create balance between courses of Technical and Vocational universities and labor market, universities should be entrepreneur. This means that university should support students until they enter to market. Development of education regardless of training opportunities makes some problems as follows:

- Failure to implement development plans due to the lack of skilled and trained workforce in the less developed regions;
- Problems in decentralization policy, especially in areas with higher education universities;
- Poverty and social exclusion, because access to higher education in addition can create job opportunity and social values.
- National Plan for Higher Education, regardless of equity in educational opportunities for women and men, different ethnicities, lack of wide access to the training enhance the community's problems, including a lack of manpower training which should be provided by provincial self-sufficiency.

Organizing technical and professional universities should be done appropriately in order to make balance between different economic sectors of the community and different needs and demands of society.

Since Iran has fertile lands and acceptable development in agricultural industry, it is expected that planners and policy makers design their short and long programs regarding to this potentials.

One of the reasons of immigration to cities is neglecting to agriculture sector and its required education. It caused Repulsion of elite educated from this sector while inequity development of service sector in cities makes cities more attractive for rural society. Technical and vocational education should consider society's needs properly, via modern technology in a way in which:

1. To attract talented students in this section.
2. Development of technical and professional fields in each section, in order to meet the needs of society and the progress of society.
3. The positive and negative effects of planning are considered in actual conditions.
4. In the development of fields and industry sectors, cultural and social issues should be considered.
5. Development of vocational and technical training centers in each region should be designed based on the type of its economic activities.

Implications:

1- Organizing universities and technical and vocational fields based on each region's potentials:

Organizing the universities in each society should be regarding to making balance between different needs of economy and society. In order to gain this goal, codifying balanced development plan for technical and vocational education is essential and each province should offer its plan separately.

2- Development of technical and vocational fields regarding to society's needs:

In order to create more proportion between fields and job market, Technical and vocational education institutes should be entrepreneur. In this case the duty of university is not only teaching and researching, but also the University should support the student until the end. It should notice if the output of university is useful for the work market. This issue can be available through cooperation of educational institutes and production sectors. In this way, monitoring of outputs' quality to choose proper alternatives to modifications is necessary. Monitoring is not the end point but a starting point for an intellectual movement to sustainable development.

3- Educational Justice in Technical and vocational education:

The necessity of considering the educational justice in society and also meeting the regional demands require increasing the capacity of application in these centers. The number of demands in each province can be a proper guideline for the capacity of admission in these centers. On the other hand, handling the regional demands with existence educational space is not available.

Therefore, considering per capita proposed space for any educational course, it is expected that the Ministry of higher education by increasing the educational spaces, tries to supply the deficiency of educational space requirements and consequently train the required manpower of each area that can be extremely helpful in the development of each region.

The amount of space needed for each faculty regarding to its different fields, obtain from multiplication of suggested capacity per capita for each field in number of applicants.

In the other hand, considering gender issues in technical and vocational education leads to equity in the country. Development of these kinds of educations lead to increase society's empowerment and facilitate accessing to resource and opportunities as well as increasing trust and substantiation of human security and social justice. It can prevent elite immigration (professor and student) both for educating and working.

4- Providing facilities for employment of educated:

The majority of the students graduated from technical and vocational college classes doesn't have enough capital to start a business related to their course of study, While most of technical and vocational courses need a large amount of capital to self-employment and benefit making.

Therefore students of technical and vocational universities need a wide support for their corporative institutes for producing and marketing. Furthermore this support can create self-employment and benefit making for graduate students and also provide benefits for the Universities to prepare its Equipment's. Supporting of trained technicians by the government and allocating some production licenses to technicians, graduated can more easily find a proper job.

5- Allocating enough budgets to provide needed equipment's for educational space:

The fifth plan of development emphasizes that 4.46 percentage of the budget should be allocated to technical and vocational education. Also, by using province validities, experimental equipment's can be developed. To create balance in technical and vocational education opportunities, technical and vocational training facilities are offered by granting banking facilities with a minimum wages in order to develop and strengthen these educations and determine governmental priorities in the allocation of credits. Also strengthening the position of technical and vocational education in the national perspective and allocate more funds for the national plans, the possibility of the development of these educations, increasing space development and also increasing efficient work forces and Consequently, the country's economic development will be provided.

6- Developing educational facilities aligned with technology progress:

To adjust technical and vocational education with fast growing development regarding to market needs, fields of study should be observed and monitored and modified continuously.

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