

Investigating the Relation between the Industry and the Technical Schools Curriculum for the Wood Industry Major in Iran

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Abstract: The present study investigates the relation between industry and technical schools regarding curriculum writing for wood industry major in Iran. Therefore, it mainly discusses this question: What is the relation between industry and technical schools regarding curriculum writing for wood industry major and how can it be improved? Questionnaires and interviews were used as the tools of collecting related data. Participants of the study were composed of two groups, first trainees, students, and principals of the technical schools practicing wood industry major, and second the owners of the wood industry including the union of home/office furniture export and the union of carpenters and furniture makers. After data were collected and analyzed, results showed that all the four participating groups believed that there was a weak (or limited) relation between the curriculum of the wood industry major and the needs of the wood industry. In other words, industry owners' opinions and needs have not yet been considered in curriculum writing for wood industry major. Based on the findings of the study, suggestions have been provided in order to enhance the relation between schools and industry for the target major. These suggestions can be applied so as to make required modifications and changes in curriculum writing in subordinate fields of study. The results of the study show that the mean score of the respondents' views according to the Likert Scale (1 - 4) is 2.45 for trainees, 1.83 for the managers of the factories, 2.77 for the principals of the technical schools, and 2.68 for the students. Therefore, according to the owners of the companies, there is the least relation between the curriculum of the wood industry major and the industry which clarifies the fact that opinions of the industry owners have not yet been considered in material writing for the major of wood industry or there has been a very limited conversation between the material writers and them. Compared to the other participants of the study, the highest score is claimed by the school principals who have stated that the relation between curriculum and industry is high. The mean score of the students and trainees' opinions also shows a low degree of relation between the industry and the curriculum. [Azarchehr Sehat, Amir Nazari, **Investigating the Relation between the Industry and the Technical Schools Curriculum for the Wood Industry Major in Iran** . *Life Sci J* 2013;10(2s):189-199] (ISSN:1097-8135). <http://www.lifesciencesite.com>. 33

Keywords: wood industry major, wood and furniture industry, technical school, vocational and technical training, curriculum, relation between curriculum and industry

Introduction

In official education of the country, vocational and technical schools are considered to be the executive of vocational and technical trainings in different majors. Since a limited percent of the high school trainees succeed to be admitted in A.A. or higher levels of study, the remaining percent should systematically be absorbed by the labor market. However, these individuals will only be absorbed if they receive sufficient training so that they have certain capacities and be able to make effective use of job opportunities. On the other hand, industry section should be willing to absorb them based on its thorough knowledge about their capability. At the moment, both industry and training sections take their own different pathways and they have little communication together. They are quite unaware of each other because of the ambiguity of the relation between industry and education. In fact, the education section writes learning materials without

knowledge about the needs of the industry section. And the industry section attempts to provide its manpower without being aware of the education section. Nowadays, national and international competitions make the industry upgrade its knowledge and technology while the education section has always been lagging behind. Most technical schools that are in charge of vocational and technical trainings in Iran, except for a few newly-established centers, possess outdated facilities while the contents of the textbooks change once several years. It means although theoretical education has changed using the new textbooks, practical training has accomplished through the same old facilities. Education and Training Organization (ETO) cannot easily update the facilities because modern technology is changing continually and supplying up-to-date facilities costs a lot of money. Creating efficient relation between education and working environment, and also using industry cooperation in

material writing can be an effective solution to this problem. Wood industry major that has been investigated in this study is one of the oldest majors amongst the vocational and technical fields of study (Marjani, 1994). In the status quo, there is enough evidence to claim that there lacks a serious and continuous relation between wood industry and the official vocational and technical training of the country (i.e. technical schools). Therefore, in order to make the curriculum of this field of study get in line with the latest technology of wood industry, investigating how and the extent of this relation seems to be a significant issue. Moreover, taking into consideration the economic profits of the industrial section which can be gained through this manpower, there should be a certain motivation for the educational centers to create such a relation and start their cooperation with training required manpower by the industry. In other words, combining the economic profits of the industry and education is the only way to optimize the vocational and technical training that requires interconnection between industry and education (Khallaghi, 2002). Therefore, the main issue of the present study is: What is the relation between industry and technical schools regarding curriculum writing for wood industry major and how can it be improved?

While conducting this investigation and answering this question, the researchers tried to clarify the status of the relation between the curriculum writing for the wood industry major and the wood industry. They also investigated new strategies that would be applied to establish effective relation between training and working place so as to help the wood industry seeks its profits in employing the graduate trainees of the technical schools. Moreover, weaknesses in their relation were determined and an efficient method to resolve them was suggested.

Methodology

Table 1. Participants

Participants	Number of Distributed Questionnaires	Number of Respondents	Percentage of Respondents
Industry Owners	130	57	43.8
Trainees	150	79	52.7
Students	589	224	38
Technical School Principals	57	38	66.7

Regarding its objectives, this study is an applied research since the results can be used to enhance the relation between industry and education. And regarding data collection, this study is a descriptive investigation because it has tried to figure

out the relation between technical training (wood industry major) and industry without manipulating the collected data. Participants of the study were composed of four groups, trainees, students, principals of the technical schools, and the owners of the wood industry. These participants were selected quite randomly so as to provide all probable participants equal chance of being chosen. In this method of sampling all of the would-be participants need to have similar sample characteristics to qualify for being selected. A separate questionnaire based on Likert Scale was compiled for each group so that the researcher could respond the main question of the study precisely (see Table 1). To ascertain that the questionnaires were reliable, they were piloted through a group of 10. After the questionnaires were modified, they were distributed among the target participants. Afterwards, the collected data were analyzed through descriptive statistics. And finally, the results and diagrams were drawn using SPSS and Excel. After the questionnaires were collected, the data were put in SPSS software and desirable outputs were provided in separate tables so that frequency of each item, total frequency, mean, and variance were presented in the tables. After total mean was calculated, explanations were given about items of each question, then bar diagrams for percentage of items frequencies and their means were drawn, and finally minimum and maximum means for each item were compared.

Review of the Related Literature

The relation between education and training has always been considered in the form of trainer-trainee. Since 1980s; however, it has been considered from a theoretical prospective where the two philosophical views of “social growth” and “social efficacy” were dominating. These two views have different strategies to combine work and education (Khallaghi², 2002). The first view which is based on John Dewey’s theories puts emphasis on social growth and believes that the relation between work and education provides students with opportunities where they can learn through experiencing whereby they can enhance their personal and social lives; in other words, cause social growth. The second view which is based on Charles Procey’s theories considers social efficacy to be boosted as a result of combining general and technical training with skill learning in working place. In other words, according to this view combining technical and vocational trainings with industry can prepare students for work and enhance their individual and social efficacy. Theoretically, combining education and industry can be resulted from this point that both views consider this combination necessary although they are

philosophically different. There are also scientific patterns to combine industry and education or work and training all over the world. Some of these patterns include: sandwich method in England, vocational training completion program in Ireland that takes two years and is specified for those students who have finished primary level of high school, and the program of vocational and technical training of talented and interested individuals in order to enhance experienced workmen's efficacy in Germany which is called dual program.

In Iran, vocational field of study has been proposed in order to bring practical aspects of work into real work place so that students can prepare themselves to enter industry and work market. Therefore, scientific evidence and objective experiences have proved that an important characteristic of vocational and technical training is that it makes an effective connection between vocational/technical education, work place, and industry. In Iran, one of the majors which has long been there is paper and wood industry. Because wood industry and its products have progressed greatly in the past decade, extensive import of raw materials and new technology of wood industry necessitates educating manpower appropriate to today's knowledge. Educating graduates of different branches of wood industry major to engage new technology in manufacturing and reach international standards of wood products which can compete industrial countries seems to be a necessity. Because of Iranian craftsmen's capability and high value added of wood industry, in near future it can answer need of national and international markets.

Although there have not been any studies on the relation between technical schools and industry (Navidi, 2005), similar studies on the relation between vocational education and job market and industry show that: Ghorbani Hosseini (1994) claims that there is no significant relation between what graduates of vocational education centers have acquired, needs of job market, and work skills; therefore, most of the graduates of technical schools of Isfahan have not been employed (Yahya'i, 2007). In fact, in its curriculum, vocational and technical education system does not take its graduates' employment into consideration. As a result, there is no significant correlation between factors like education centers and work place, students' education in technical schools and their self-employment and job satisfaction. And both sides are quite unaware of need of the other side. Moreover, graduates will continue their studies in universities if they are not employed (Khallaghi, 1990). On the other hand, some (Gha'edi, 1994) believe that investment in vocational and technical education is one of the most expensive

investments which research has shown that it has positive outcomes. Moreover, because of industry's need to technical personnel in manufacture line or other sections, extending technical education and teaching different skills can result in development of manufacturing units in cities and provinces (Sarkhosh, 1996). The results of an investigation (Khallaghi, 1990) show that students of technical schools located near factories and having more exposure to industry make greater progress compared to students of technical schools located far from factories but following the same syllabi. Therefore, it can be concluded that technical education results in higher rate of employment if it is flexible enough and concords with characteristics of job market and economic status of the country (Karimi, 2003). Such trainings can provide both special skills required by industry and general skills of job market. They can also provide employees, who run across problems because of new technologies, with opportunities to enhance and adapt their skills and capacity. Therefore, the role of these trainings in social and cultural changes has been considered highly significant. According to principals of technical schools, abusing is the most important reason for the private section not to cooperate in technical and vocational trainings, and according to the managers of industries (private section), the reason for that is the weakness of the private section (Abdollahpour, 2001). A lot of factors affecting students' learning at school can also have their influence in work place (Helms, 2005). Relation between school and work provides students with another opportunity that is it familiarizes students with employees' abilities, limitations, and mental motivation. UNESCO and ILO in a mutual recommendation (2002) stated that the quality of Technical and Vocational Education and Training (TVET) helps to enhance individuals' technological and scientific knowledge in a work place that requires technical qualification and special skills. Therefore, national TVET systems need to extend knowledge and skills so as to make the manpower more flexible and meet requirements of local job market in this competitive world economy. Some countries have made modifications to their TVET system based on combining education with work and with a technical and vocational point of view. TVET systems should be broad and extensive so that applicants even in the poorest regions can have access to education. These systems; however, can provide people living in urban and rural regions an opportunity to equip their lives so that they can live a fruitful and satisfactory life which in turn results in prosperity and welfare of the society as a whole. Review of the related literature confirms the fact that advantages of technical training are

undeniable and although these trainings cost more than mere theoretical education, it should be noted that their advantages are more than their disadvantages. However, creating an effective connection between technical and vocational education and industry has always contained its own difficulties. And this is the missing link that this study takes as its main concern. Technical and vocational training cannot fully respond needs of industry because such trainings do not rotate around in accordance with the industry. Therefore, the graduates of this major (i.e. wood industry) cannot take full advantage of related job opportunities and most of them are employed in irrelevant jobs, which resulted in their job dissatisfaction or study continuation.

Results of Data Analysis

A researcher-made questionnaire was distributed among the principals of the technical schools, trainees, students, and the managers of the factories in order to figure out suitable responses to the main question of the study (i.e. What is the relation between industry and technical schools regarding curriculum writing for wood industry major and how can it be improved?). Analysis of the collected data confirms the findings reported in the review of the related literature. The results from analysis of the data collected from different respondents' views and related tables are presented in following section.

1. Results of the Trainees' Views

A total number of 79 trainees took the

questionnaire and evaluated the items as (1) very low, (2) low, (3) high, and (4) very high. The collected data are provided in Table 2. Calculations conducted according to the data presented in Table 2 show that the total mean score of the trainees' views about the level of relation between curriculum and wood industry is 2.45. Since the calculated mean is between 1.5 and 2.5 ($1.5 < 2.45 < 2.5$), it can be concluded that according to the trainees there is a low relation between curriculum and industry. According to the data presented in Table 2, items 1, 2, 6, and 8 which are about the relation between the curriculum of the wood industry major and wood industry have been scored "Low" by most of the trainees which indicates that there is a low rate of relation between technical schools and industry according to the trainees. The highest percentage is that of item 6 (50%) which has been scored as "Low" indicating that most of the trainees believe that the time allotted to the specific courses (rather than practical ones) cannot prepare students to enter the industry. According to Diagram 2, the highest mean which is 2.72 has reported for item 3. Since the mean is between 2.5 and 3.5 ($2.5 < 2.72 < 3.5$), it can be concluded that according to the trainees of wood industry major, the curriculum can comparatively familiarize students with wood industry. The least mean is 2.15 which is reported for item 7. Since this mean is between 1.5 and 2.5 ($1.5 < 2.15 < 2.5$), it can be concluded that trainees of wood industry major believe that the allotted time to the practical courses (workshop) is not enough to equip students with required skills.

Table 2. Collected Data based on the Trainees' Views

N.	Item	(4) Very High		(3) High		(2) Low		(1) Very Low		Total Frequency	Mean	Variance
		F.	P.	F.	P.	F.	P.	F.	P.			
1	The relation between curriculum of wood industry major and wood industry is high.	4	103	30	38.5	35	44.9	5	6.4	78	2.53	0.59
2	Educational environment of the school (workshop) is similar to that of industrial workshops.	6	7.6	21	26.6	38	48.1	14	17.7	79	2.24	0.7
3	The curriculum of wood industry major can familiarize students with wood industry.	10	12.7	37	46.8	32	40.5	0	0	79	2.72	0.46
4	The content of the curriculum of wood industry major is in accordance with needs of wood industry.	7	9	35	44.9	32	41	4	5.1	78	2.58	0.53
5	The book content of the wood industry major is in harmony with wood industry.	9	11.4	35	44.3	32	40.5	3	3.8	79	2.63	0.54
6	Time allotted to the specific courses (rather than practical ones) is sufficient for preparing students to enter the industry.	6	7.7	21	26.9	39	50	12	15.4	78	2.27	0.67
7	Time allotted to the practical courses (workshop) is sufficient to learn required skills.	7	9	20	25.6	29	37.2	22	28.2	78	2.15	0.89
8	The specific books of the wood industry major provide students with enough information about wood industry.	4	5.1	35	44.9	35	44.9	4	5.1	78	2.50	0.46
Total Mean Score											2.45	

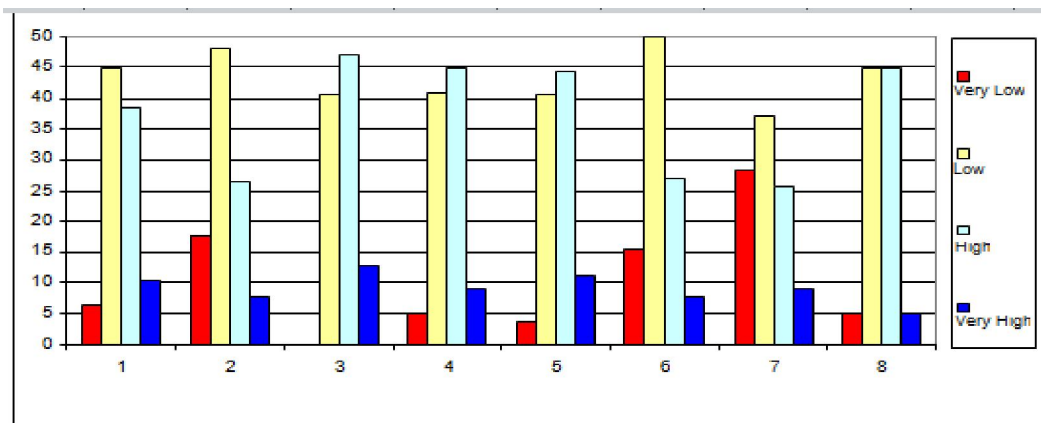


Diagram 1. The Trainees' Agreement over the Items

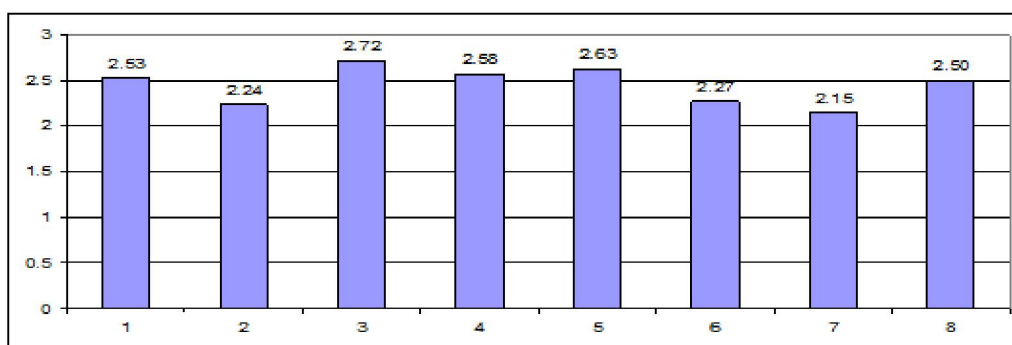


Diagram 2. Mean Score of the Trainees' Agreement over the Items

Table 3. Collected Data based on the Factory Managers' Views

N	Item	(4) Very High		(3) High		(2) Low		(1) Very Low		Total Frequency	Mean	Variance
		F.	P.	F.	P.	F.	P.	F.	P.			
1	The managers of wood industry have enough knowledge about wood industry major.	0	0	6	10.9	32	58.2	17	30.9	55	1.8	0.39
2	The industry managers are well familiar with school workshops of wood industry.	1	1.8	2	3.6	36	65.5	16	29.1	55	1.78	0.36
3	There is communication between education department of wood manufacturing units and technical school.	0	0	2	3.8	21	39.6	30	56.6	53	1.47	0.33
4	The industry managers are ready to conduct practical careers (workshop) for students of wood industry major.	11	20	18	32.7	19	34.5	7	12.7	55	2.6	0.91
5	The present relation of wood industry and technical schools is enough.	0	0	2	3.7	15	27.8	37	68.5	54	1.35	0.31
6	Wood industry managers regularly visit technical schools.	2	3.6	2	3.6	19	34.5	32	58.2	55	1.53	0.55
7	Wood industry managers cooperate in writing curriculum and book contents of wood industry major.	0	0	0	0	14	25.5	41	74.5	55	1.25	0.19
8	The wood industry managers are well aware of technical school graduates' technical and scientific capacities.	2	3.6	2	3.6	35	63.6	16	29.1	55	1.8	0.45
9	The industry managers are well aware of textbooks of wood industry major.	0	0	5	9.1	28	50.9	22	40	55	1.69	0.4
10	The wood industry managers cooperate with technical schools as consultants.	0	0	2	3.6	21	38.2	32	58.2	55	1.45	0.33
11	The industry managers agree with establishing technical schools in vicinity of the factories.	16	29.6	11	20.4	18	33.3	9	16.7	54	2.63	1.18
12	The industry managers agree with conducting practical education in factories.	16	29.1	10	18.2	21	38.2	8	12.7	55	2.6	1.21
Total Mean Score											1.83	

2.Results of the Factories Managers’ Views

A total number of 57 managers of factories took the questionnaire and scored the items as (1) very low, (2) low, (3) high, and (4) very high. The collected data are provided in Table 3.

Calculations conducted according to the data presented in Table 3 show that the total mean score of the factory managers’ views about the level of relation between curriculum and wood industry is 1.83. Since the calculated mean is between 1.5 and 2.5 ($1.5 < 1.83 < 2.5$), it can be concluded that according to the factory managers there is a very low relation between curriculum and industry.

According to the data presented in Table 3, items 3, 5, 7, and 10 which are about the relation between the curriculum of the wood industry major and wood industry and also their cooperation in curriculum designing have been scored “*Very Low*” by most of the factory managers which indicates that there is a low rate of relation between technical schools and industry according to the factory managers. According to the data presented in Bar Diagram 4, the maximum mean score is 2.63 which is related to item 11. Since the calculated mean is between 2.5 and 3.5 ($2.5 < 2.63 < 3.5$), it can be concluded that the factory managers highly agree with establishing technical schools in vicinity of the

factories. And the minimum mean score is 1.25 which is related to item 7. Since the calculated mean is between 0.5 and 1.5 ($0.5 < 1.25 < 1.5$), it can be concluded that the factory managers have very limited cooperation in curriculum designing for wood industry major.

3. Results of the Technical School Principals’ Views

A total number of 38 technical principals took the questionnaire and scored the items as (1) very low, (2) low, (3) high, and (4) very high. The collected data are provided in Table 4. Calculations conducted according to the data presented in Table 4 show that the total mean score of the technical school principals’ views about the level of relation between curriculum and wood industry is 2.77. Since the calculated mean is between 2.5 and 3.5 ($2.5 < 2.77 < 3.5$), it can be concluded that according to the technical school principals there is a relative relation between curriculum and wood industry.

According to the data presented in Table 4, items 3, 5, and 8 which are about the relation between the curriculum of the wood industry major and wood industry have been scored “*High*” by most of the technical school principals which indicates that there is a high rate of relation between technical

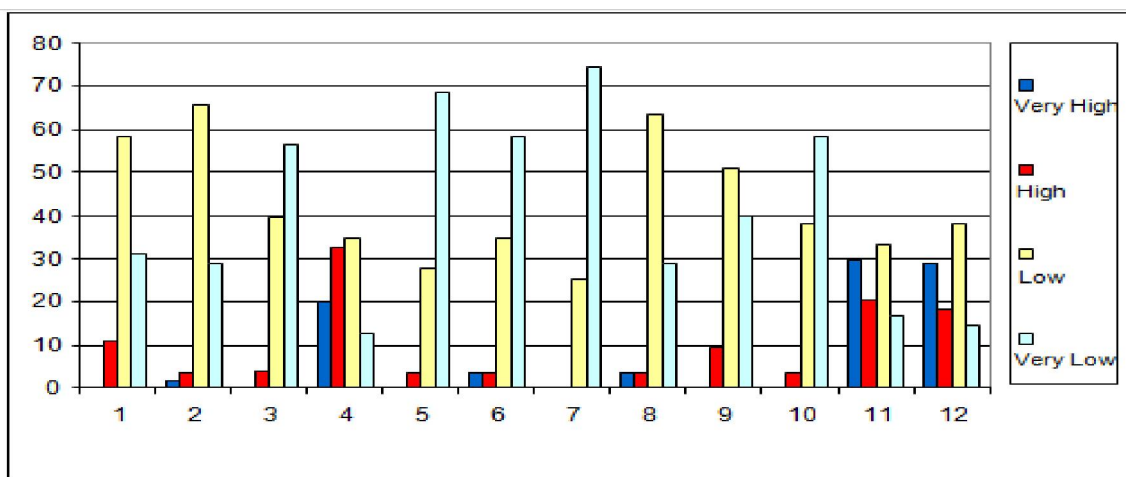


Diagram 3. The Factory Managers’ Agreement over the Items

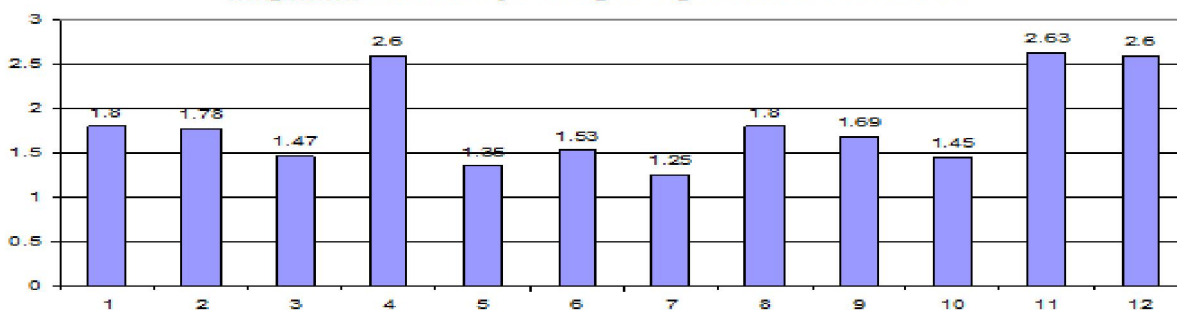


Diagram 4. Mean Score of the Factory Managers’ Agreement over the Items

schools and industry according to the school principals. The highest percentage is that of item 3 (70.6%) which has been scored as "High" indicating that most of the technical school principals believe that the curriculum of wood industry major can highly familiarize trainees with wood industry. According to the data presented in Bar Diagram 6, the maximum mean score is 3.29 which is related to item 3. Since the calculated mean is between 3.5 and 4.5 ($3.5 < 3.29 < 4.5$), it can be concluded that wood industry major curriculum can highly familiarize trainees with wood industry. And the minimum mean score is 2.5 which is related to item 7. Since the calculated mean is between 1.5 and 2.5 ($1.5 < 2.5 < 2.5$), it can be concluded that the allotted time to the practical courses (workshop) is not enough to acquire require skills.

4. Results of the Students' Views

A total number of 224 students took the questionnaire and scored the items as (1) very low, (2) low, (3) high, and (4) very high. The collected data are provided in Table 5. Calculations conducted according to the data presented in Table 5 show that the total mean score of the students' views about the level of relation between curriculum and wood industry is 2.68.

Since the calculated mean is between 2.5 and 3.5 ($2.5 < 2.68 < 3.5$), it can be concluded that according to the students there is a relative relation between curriculum and wood industry. According to the data presented in Table 5, items 1, 3, 4, 6, and 7 which are about the relation between the curriculum of the wood industry major and wood industry have been scored "High" by most of the students which indicates that there is a high rate of relation between technical schools and industry according to the students. The highest percentage is that of item 6 (51.3%) which has been scored as "High" indicating that most of the students (71.4%) believe that the specific textbooks provide enough information about wood industry. According to the data presented in Bar Diagram 8, the maximum mean score is 2.95 which is related to item 8. Since the calculated mean is between 2.5 and 3.5 ($2.5 < 2.95 < 3.5$), it can be concluded that according to the students, vocational training in factories can complete their career. And the minimum mean score is 2.26 which is related to item 9. Since the calculated mean is between 1.5 and 2.5 ($1.5 < 2.26 < 2.5$), it can be concluded that the allotted time to the practical courses (workshop) is not enough to acquire require skills.

Table 4. Collected Data based on the Technical School Principals' Views

N.	Item	(4) Very High		(3) High		(2) Low		(1) Very Low		Total Frequency	Mean	Variance
		F.	P.	F.	P.	F.	P.	F.	P.			
1	The relation between curriculum of wood industry major and wood industry is high.	6	16.7	14	38.9	16	44.4	0	0	36	2.72	0.57
2	Educational environment of the school (workshop) is similar to that of industrial workshops.	8	22.2	18	50	4	11.1	6	16.7	36	2.78	1.01
3	The curriculum of wood industry major can familiarize students with wood industry.	10	29.4	24	70.6	0	0	0	0	34	3.29	0.22
4	The content of the curriculum of wood industry major is in accordance with needs of wood industry.	10	27.8	16	44.4	10	27.8	0	0	36	3	0.59
5	The book content of the wood industry major is in harmony with wood industry.	2	5.6	18	50	16	44.4	0	0	36	2.61	0.37
6	Time allotted to the specific courses (rather than practical ones) is sufficient for preparing students to enter the industry.	6	16.7	12	33.3	14	38.9	4	11.1	36	2.56	0.85
7	Time allotted to the practical courses (workshop) is sufficient to learn required skills.	6	16.7	8	22.2	20	55.6	2	5.6	36	2.5	0.74
8	The specific books of the wood industry major provide students with enough information about wood industry.	4	11.1	18	50	14	38.9	0	0	36	2.72	0.45
Total Mean Score											2.77	

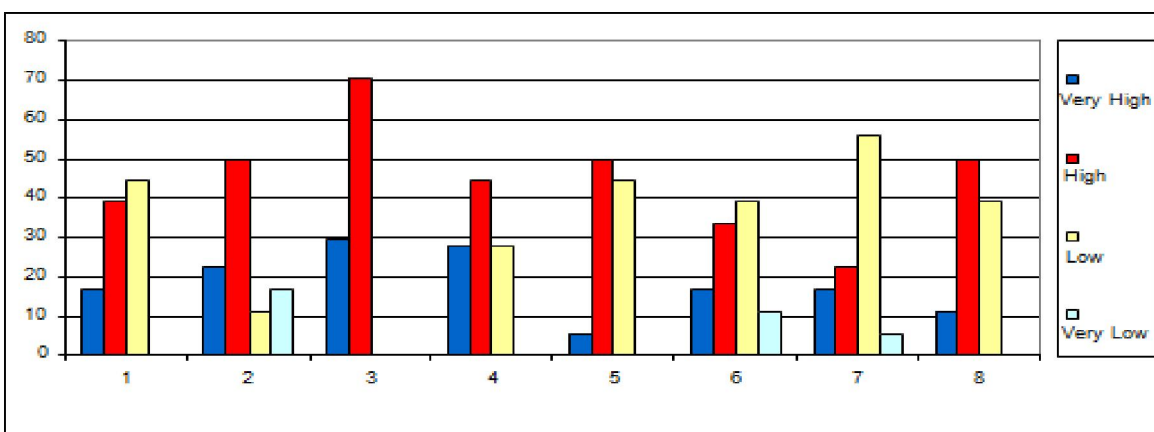


Diagram 5. The Technical Principals' Agreement over the Items

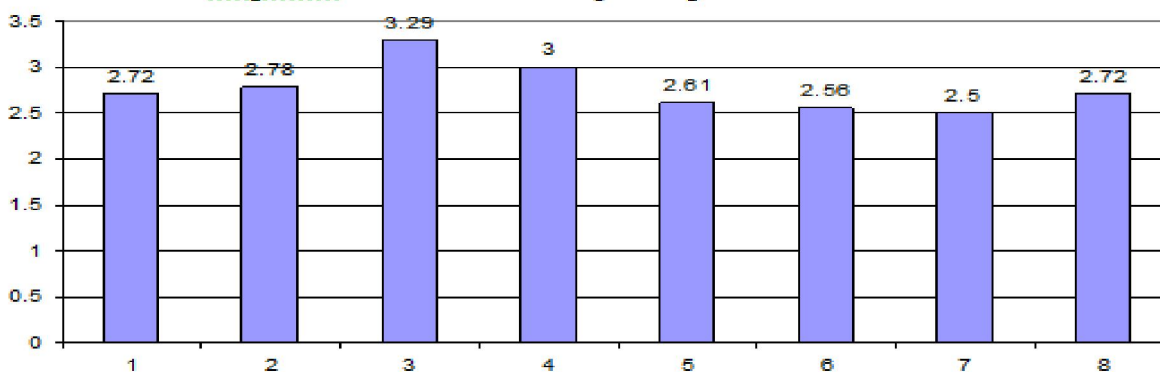


Diagram 6. Mean Score of the Technical School Principals' Agreement over the Items

Table 5. Collected Data based on the Students' Views

N.	Item	(4) Very High		(3) High		(2) Low		(1) Very Low		Total Frequency	Mean	Variance
		F.	P.	F.	P.	F.	P.	F.	P.			
1	The present status of wood industry major in technical school can help students succeed in job market.	26	11.7	110	49.3	72	32.3	15	6.7	223	2.66	0.6
2	The content of wood industry major curriculum is in accordance with the present status of wood industry.	26	11.8	75	33.9	99	44.8	21	9.5	221	2.48	0.68
3	The present status of wood industry major in technical school help students work in a factory in the future.	49	22.2	80	36.2	64	29	28	12.7	221	2.68	0.92
4	The book content of the wood industry major is in harmony with wood industry.	50	22.5	89	40.1	55	24.8	28	12.6	222	2.73	0.91
5	The students are willing to go through their vocational trainings in schools where they study.	94	42.2	42	18.8	36	16.1	51	22.9	223	2.81	1.47
6	The specific books of the wood industry major provide students with enough information about wood industry status.	45	20.1	115	51.3	55	24.6	9	4	224	2.88	0.59
7	Time allotted to the specific courses (rather than practical ones) is sufficient for preparing students to enter the industry.	42	18.8	86	38.6	71	31.8	24	10.8	223	2.65	0.82
8	Passing vocational career in a factory completes the student's training.	73	32.7	81	36.3	54	24.2	15	6.7	223	2.95	0.84
9	Time allotted to the practical courses (workshop) is sufficient to learn required skills.	38	17.1	60	27	45	20.3	79	35.6	222	2.26	1.25
Total Mean Score											2.68	

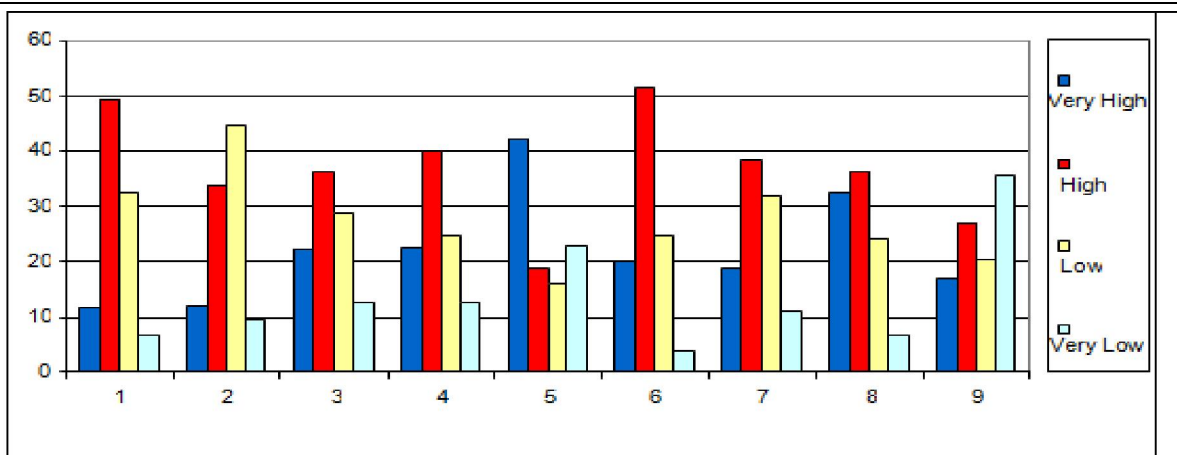


Diagram 7. The Students' Agreement over the Items (Percent)

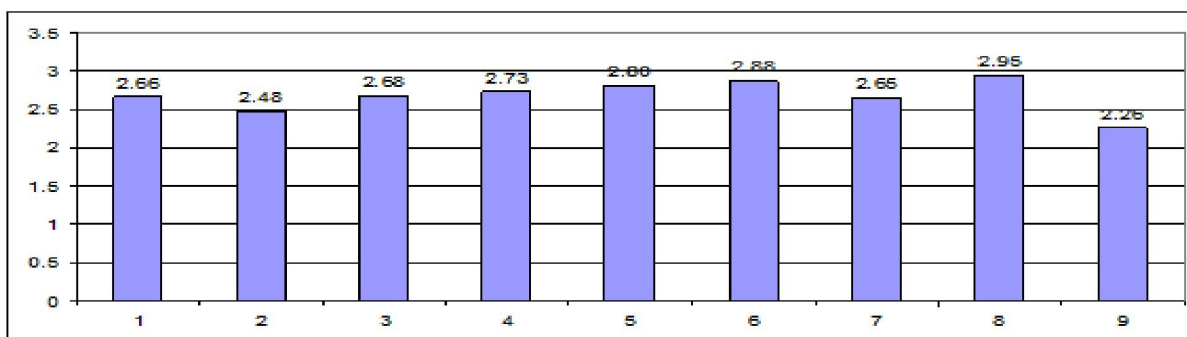


Diagram 8. Mean Score of the Students' Agreement over the Items (Percentage)

Conclusion

The mean score of the four groups' views is 2.45 for trainees, 1.83 for the managers of the factories, 2.77 for the principals of the technical schools, and 2.68 for the students. The total mean score is 2.6 and the variance is 0.17. The total mean score of all groups is 2.6, which indicates that there is a comparatively weak relation between curriculum and industry. The lowest relation between industry and wood industry curriculum is claimed by the managers of factories. This mean score clarifies the fact that either industry owners have not yet been engaged in curriculum designing or they are quite unaware of this issue. The maximum mean score is reported by the principals of the technical schools who claimed that there is a strong relation between industry and curriculum. Most of the factory managers have selected "Very Low" options, which is an indication for the weak relation that exists between technical schools and industry. And most of the technical school principals have chosen "Very High" options. The lowest relation has been reported by the managers of the factories; however, the technical school principals and students believe that there is a relatively high relation between industry and school. If factory managers are considered as the representatives of industry and the technical school

principals, trainees, and students as the representatives of education, it can be mentioned that the mean score of industry representative is very low and that of education representatives is relatively high. These mean scores clearly show that the relation between industry and education is very low. Because some of the technical school principals hold degrees other than wood industry major and are non-technical, they are not well aware of the required equipment of workshops, their quality, and the status of wood industry.

The analysis of data collected about the relation between curriculum and industry provide the following results:

- According to the trainees, there is a low and weak relation between wood industry curriculum and wood industry and this curriculum can partially familiarize the trainees with wood industry. The same fact is claimed by the managers of industry; however, the students and technical school principals consider this relation relatively weak.
- Most of the participants believe that the allotted time to specific courses (other

than the practical ones) is not enough to prepare the trainees and students to enter industry and job market. They also consider the allotted time to practical courses (workshops) is insufficient. Moreover, the industry managers highly agree with establishing technical schools in vicinity of factories because they believe that it will enhance and strengthen the relation between them and education.

Based on the views of the four groups, it can be concluded that there is a very weak relation between education and industry although the content of the textbooks of the wood industry major are up-to-date and in accordance with wood industry. The managers of the factories believe that they have no say in curriculum designing. This finding is in agreement with that of Ghorbani Hosseini (1994) and Yahya'i (2007) who have concluded that there is no systematic relation between education and industry and these two are unaware of each other's needs. Therefore, a lot of technical school graduates are not employed in relevant jobs. Since technical schools require higher education expenses compared to other education centers, employing the trainees in irrelevant jobs is a waste of money and it reveals its lack of efficient management and curriculum. Factory managers believe that technical schools located near factories are useful and they agree to establish such schools. This fact has been stated by Khallaghi (1990). He concludes that the trainees' progress of technical schools in vicinity of factories is higher than those of regular schools. In addition, factors like future employment and practical education along with work and cooperation of industry units result in educational progress of students in vicinity of and far from factories.

Analyzing the views of the four group shows that there lacks a suitable relation between education and industry. This relation needs to be enhanced and it is only possible if both sides establish a systematic relation and make best use of the existing equipment and share their knowledge and profits.

Suggestions

According to the findings of the study, following suggestions are proposed in order to boost the relation between education and industry:

1. Establishing a mutual relation between curriculum writers and managers of wood industry and furniture

unions so as to modify the curriculum and supply mutual needs.

2. Establishing technical schools in vicinity of factories through the investment of the private section and compiling new constitutions so that the schools in vicinity of factories can have more flexible syllabi and be provided with specialized units to supply needs of the industry.

3. Passing a legal bill by the government in order to facilitate acceptance of trainees for apprenticeship careers.

4. Since the allotted time to specific and practical courses is not enough for the trainees to acquire skills, specialized and practical trainings should be given to them in all three years of education. It can be possible considering the education system of the country, 6-3-3.

5. Regulating the objectives of education and training organization with needs of job market and the country.

6. Allotting facilitating procedures to the factories that are willing to establish technical schools in their vicinity because the industry section tends to do so.

7. Assigning an apprenticeship specialist in the office of vocational and technical training centers and centers of the provinces so as to activate the relation between education and industry.

8. Designing a precise executive program of apprenticeship and keenly supervising this career.

9. Passing an act to valuate trainings of vocational and technical education and force industry and trade unions to employ graduates of technical schools.

10. Holding training-during-service programs in accredited centers.

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