

Exposure of Secondary School Students to Construction Industry Professions

Muhammad Qurniawan Mohmad Jamalludin and Kartina Alauddin

¹Faculty of Architecture, Planning and Surveying, University Teknologi MARA Perak Branch, Perak, Malaysia,

Abstract: The construction industry is the biggest sector that contributes to economic growth. As the biggest sector, construction has heavily influenced and encouraging youngster nowadays to get involved in the construction industry. However, almost overall secondary school students are lack of exposure to the professions in the construction industry. Moreover, the construction industry is not popular professions compare than education, applied science, social science, business, law, mathematics professions, etc. Revelation among secondary school students must be done to ensure the development of the construction industry is not only governed by foreign workmanship. The objectives of this paper are to identify the level of exposure of secondary school student's towards construction industry professions and to identify factors that contribute to their exposure towards contractor, architect, quantity surveyor and civil and structural engineer professions. The study focused on the Centre of Perak District. There are nine (9) main professionals' position and five (5) factors were identified by reviewing related literature. Then a questionnaire was developed and distributed to secondary school students who completed their "Sijil Pelajaran Malaysia" (SPM). This study adopted accidentally sampling for data collection. The questionnaire was distributed during the program "Selangkah ke-UiTM" at the open day of Universiti Teknologi MARA Perak Branch. From 100 distributed questionnaires, only 81 have successfully returned to the researcher. The collected data of 81 responses were then analyzed statistically by using descriptive analysis. As a result, most secondary schools' exposure to contractor, architect, quantity surveyor and civil and structural engineer from the family, teachers and mass media. The results of this study may provide great assistance to the school, teachers, and government in increasing the exposure of students towards the construction industry with different tools.

Key words: *Secondary Schools, Professions, Construction Industry, Students, Perak District.*

INTRODUCTION

Malaysia's construction industry has been growing ever since Malaysia was a developing country. The number of construction project in Malaysia has been rise over the year. This also stated by [1] the data obtained from Department of Statistic of Malaysia are recorded about 10,000 construction projects in the fourth quarter of 2015 compared in the third quarter of 2014 the construction project is 9,883. The data being prove that construction project increase from 2014 to 2015.

Malaysia starts with 12 steps, each representing a key economic area that contribute towards developing Malaysia by 2020. By the

implementation 12 National Key Economic Area (NKEA) indirectly contributing to the increasing of the construction industry in Malaysia. This is because by develop every National Key Economic Area its need construction sector.

From this scenario, Malaysia required professional's bodies to ensure continuity of development country. This is because they are important asset as a key to move towards developing country [2]. Hence, youth are urged to develop their interest towards construction professions this is because it can help the Malaysian's economy growth [3] stated that data obtained from strategy report reaching the basic 60:40 science / technical stream: literature and it is

Corresponding Author: Kartina Alauddin, UiTM Perak Branch, FSPU, Kampus Seri Iskandar, 0134818111, karti540@uitm.edu.my

recorded only 41% secondary school students in science / technical stream where 29% in pure science and the balance which is 12% from technical stream. We can conclude that more than half of secondary school students are not exposed into construction profession.

Therefore, this research must be done in order to know the level of exposure of secondary school students towards construction industry professions and to know factors that contribute to their exposure towards construction industry professions.

LITERATURE REVIEWS

The term “exposure” is about the level of individual’s knowledge regarding something. Exposure can be attributed to an individual who is alert to what is happening or is related to something and other than that exist interest in their self towards something [4]. In the other words, the individual aware about construction professions is individual who have little bit knowledge about that profession and he or she know by realizing the advantage and benefits when he or she choose that profession.

Construction industry divide into two categorize of construction the first is building construction, the second is civil construction [5]. Building construction is construct resident and commercial building. Civil construction is construct bridge, rail and others civil work. There are five main parties actively involved in construction industry but it can be more than five parties involved. Among the main parties which is architect, civil engineer, quantity surveyor, mechanical engineering and contractor [6].

Students is an individual who are gain anything about education, lesson and full-time or part-time study at higher educational institution [7]. Term secondary school student in this research refer to student that study in school aged 17 years old and above. School is an entity, organization or institution that execute such activity manages, monitor and teaching [8].

Family background being one of the factors that make secondary school student not exposure in construction profession. This is because parents are the first role model that make students wants to be like them. For example, if they are among student

who raise by farmer directly, they will not exposure in construction sector but they will be exposed in agriculture sector. This is supported by [9], the career that choosing by secondary school student are totally influenced by the background of family to which they belong.

According to [10] counseling unit is effective approach in order to giving the career awareness to secondary school students. This means counseling is a best method that can increase the level of knowledge of secondary school students towards career field. According to [11], 84% of high school students in America has met counselors for getting information on career planning. This clearly show that counselor being the second person that secondary school student to having the information about the career.

Extension of mass media has brought major changes in every aspect of life towards people. All the information required by secondary school students can be obtained by their fingertips through mass media. This is supported by [12], secondary school students can get the information regarding subject or topic by surfing the internet. In this research context, the existence of mass media indirectly acts as a platform for secondary school students to be exposure regarding construction industry professions.

Friends are the most closes person in school life. Frequently secondary school students spend their time with their friends even after school hour. Indirectly, secondary school students will be influence by their friend regardless negative or positive input. This is supported by [13], friends can give many positive impacts in adolescent’s life. So, in this research context, friends can cause secondary school students expose to construction industry profession through their activities in daily life.

Secondary school students of all generations are equipped with books or printed material as their reference to study the topic or subject [14]. Books or magazines is providing the information same as mass media but in the different ways. Secondary school students will read books and magazine in order to know about something. As we know that books and magazines also provide the information such as profession in construction industry. Those secondary school students who read the books or

magazines about profession in construction industry indirectly will expose to that career field.

METHODOLOGY

The sampling method that had been chosen for this study was non-probability sampling. The term non-probability sampling was used when the selection of the sample does not equally being chance to be selected. The chosen method for this study was accidentally sampling (grab sampling or convenient sampling). According to [15], accidentally sampling also known as convenient sampling where this method sampling is one of the non-probability sampling. Accidentally sampling has been used where the target respondents bump into a certain criterion such as easy accessibility and target respondent available at certain period of the time. Accidentally sampling is a method where researcher coincidentally meet his respondent near to his place while conducting the data collection.

This research is focused on secondary school student. Targeted respondent are concentrating on student who are in range 17 years old and above. The data collection was conducted at Dewan Seri Iskandar in Universiti Teknologi MARA (UiTM) Perak branch and all the secondary school students who just completed their examination *Sijil Pelajaran Malaysia* (SPM) attend to the *Jom Selangkah ke UiTM* event. They were selected randomly to participate in this research.

FINDINGS

Exposure to the Industry Professions

Based on the table 1 and figure 1, the levels of exposure of secondary school student towards construction industry professions is presenting. Level of exposure of secondary school students was analyzed based on mean and it ranked from one to nine. The majority secondary school students noticed that contractor was one of the parties that involve in construction industry profession with mean 3.46. The second ranking was agreed by the respondents was architect is one of the parties involve in construction industry profession with mean 3.40. This result had been expected because most people are aware of the existed of an architect.

Quantity surveyor and building surveyor were one of the parties involved in construction industry

profession. This professions share same ranking with agreed mean for both professions were 3.38. This opposite what was researcher mentioned in previous research where architect and civil engineering are accustomed among secondary school student, parents and society nonetheless profession like quantity surveying has being exist long time ago but they do not realize [16]. Nowadays, Most of secondary school students knew about quantity surveyor. This is because [17] stated that secondary school students can get the information regarding subject or topic by surfing the internet.

Followed by the number four ranking was civil and structure engineering. Based on result that had been collected, most of secondary school students agreed with statement which said "I notice civil and structure engineering is one of the parties involved in construction industry" with mean 3.37. While the fifth ranking was land surveyor with mean 3.27. In average, respondent who answered the questionnaire realized land surveyor was one of the parties involved in construction industry. Next was town planner. Secondary school students acknowledged town planner was one of the parties involved in construction industry.

However, Based on data that had been collected and analyzed there are two profession were got average mean below 3.00 which are interior designer and mechanical and electrical engineering. The second last ranking was interior designer with average mean 2.95 while the next ranking for this study was mechanical and electrical engineering. With average mean 2.85 mechanical and electrical engineering be the last ranking for this study.

Table 1: Ranking of Exposure

Exposure of Secondary School Students towards Professions	Mean	Ranking
(a) Architect	3.40	2
(b) Civil and Structure Engineer	3.37	4
(c) Mechanical and Electrical Engineer	2.85	8
(d) Quantity Surveyor	3.38	3
(e) Contractor	3.46	1
(f) Building Surveyor	3.38	3
(g) Interior Designer	2.95	7
(h) Land Surveyor	3.27	5
(i) Town Planner	3.19	6

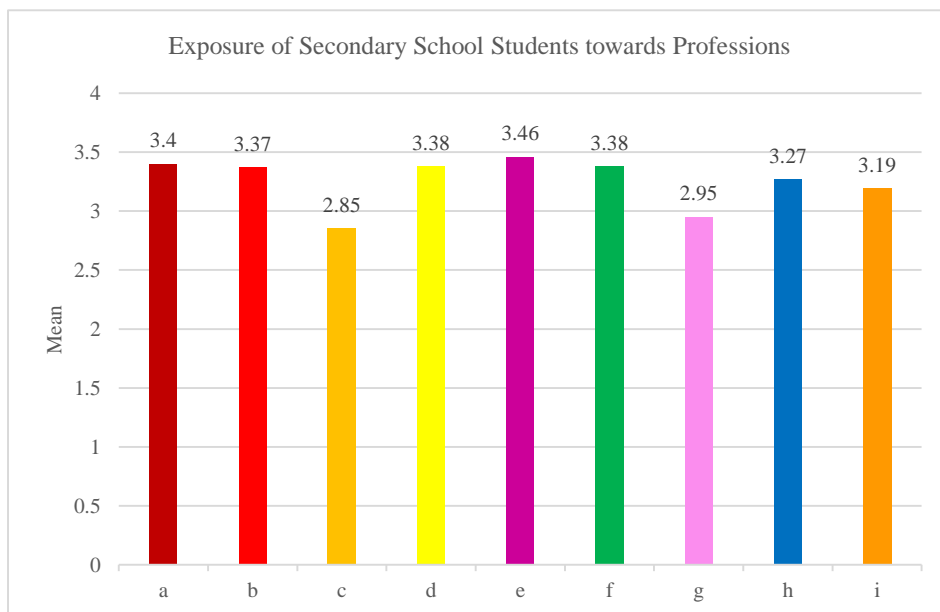


Figure 1: Mean of Exposure

Factors Contribute to Their Exposure towards Construction Industry Professions

Table 2 shows the factors contribute to the secondary schools exposure towards the construction industry professions. However, this section only focused to the four most professions that exposed to the secondary students, namely as Contractor, Architect, Quantity Surveying and Civil and Structure Engineer.

Contractor

The finding shows the frequency of factors that make respondents exposure to the contractor profession. 43 secondary school students agreed on they knew about contractor profession from family

and put this variable as the first factor. This is because family was the closed person for secondary school students and family also will be the first person that secondary school students can asking for questions. Next, teachers was the second highest that contributed to the awareness of respondents towards contractor profession with frequency of 37 respondents agreed with that. While mass media in the third place as contribution to the awareness of secondary school students toward contractor profession with frequency of respondent around 36 secondary school students. Friend, books and magazines also played the important role by gave the awareness of respondents towards contractor profession with both factors got 21 respondents agreed.

Table 2: Factors Contribute to their Exposure towards Construction Industry Profession

PROFESSIONS	Factors				
	Family	Teacher	Friend	Books & Magazine	Mass Media
P1- Architect	f=41	f=37	f=18	f=17	f=46
P2- Civil & Structure Engineer	f=37	f=39	f=20	f=22	f=36
P3- Mechanical & Electrical Engineer	28	19	12	14	29
P4- Quantity Surveyor	f=34	f=34	f=16	f=17	f=43
P5- Contractor	f=43	f=37	f=21	f=21	f=36
P6- Building Surveyor	33	38	13	16	35
P7- Interior Designer	24	23	11	18	34
P8- Land Surveyor	34	32	14	18	34
P9- Town Planner	34	31	17	17	34

Architect

Meanwhile for the architect, 46 respondents agreed on they got exposure towards architect profession through mass media. While the second highest factor that made respondents expose toward architect profession was family with 41 of respondents agreed with that. Third highest factors that contribute to respondent’s exposure toward architect profession was teacher which around 37 respondents said they knew that profession from their teacher at school. Next, 18 respondents said they heard about architect profession from their friends and with 17 frequency of respondents knew about architect profession through read some books and magazines.

Quantity Surveyor

43 secondary school students agreed on they knew about quantity surveyor profession through mass media. This is because mass media being the main sources for gathered the information. Next, families and teachers were factors that contributed to the awareness of respondents towards quantity surveyor profession with both variables got frequency of 34 respondents agreed with that. While Books and magazines also contributed to the awareness of respondents towards quantity surveyor profession at 17 respondents agreed and 16 respondents said they heard about quantity surveyor profession from their friends.

Civil and Structural Engineer

39 respondents agreed on they knew about civil and structure engineer profession from teachers in school. Next, 37 respondents said they agreed on

they got exposure toward civil and structure engineer from family. While got exposure toward civil and structure engineer through mass media was around 36 respondents. Books and magazines also contributed to the awareness of respondents towards civil and structure engineer profession at 22 respondents agreed and with 20 respondents said they heard about civil and structure engineer profession from their friends.

CONCLUSIONS

There are various possible factors that contributed to their exposure towards construction professions. However, every profession had different major factor that contributed to their exposure towards that profession. Based on data that had been analyzed most of secondary school students agreed they knew about professions like architect, mechanical & electrical engineer, quantity surveyor through mass media. Next, secondary school students got the information about profession like civil & structure engineer or building surveyor through teacher. There are also agreed that major factor that contributed to their exposure toward construction industry profession was family. Profession that got exposure from family was the contractor. Next, this study hopes that in the future, the study should examine the different perceptual experiences of respondents if the study focuses to a larger area such as Peninsular Malaysia in order to achieve more accurate data and analysis.

REFERENCES

[1] Wong H.Y, Chester K., Abdul Rahim A. H. Haziq Z. & Zahari A. (2017). Foreign workers’

composition at construction site. *Journal of Advanced Research Design*, Issue 1, pp. 12-21.

[2] Kamro, M. B., (2012). Kesediaan Menceburi Kerjaya Kejuruteraan Binaan Dalam Kalangan Pelajar Jurusan Binaan Bangunan Di Sekolah Menengah Vokasional. Laporan projek, p. 14.

[3] Hassan R., Awang H, Ibrahim B. & Zakarian S. H., (2013). Memacu Pelan Transformasi Pendidikan: Peranan IPTA Dalam Membantu Meningkatkan Kuantiti Dan Kualiti Pendidikan Aliran Sains Dan Teknikal Di Malaysia.. p. 9

[4] Balwi (2004). Satu Kajian Terhadap Kesedaran dan Kesediaan Pelajar Universiti Menggunakan E-Pembelajaran sebagai Alat Pembelajaran: Satu Kajian di Universiti Teknologi Malaysia, Skudai, Johor. Universiti Teknologi Malaysia

[5] Larrabee & Richard, (2014). High School and College Student Perceptions of Careers in the Construction Industry. p. 18.

[6] Owolabi O.S.B, & Olatunji A.S, (2014). The Roles of Construction Professionals in the Nigeria's Construction Industry. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, 19(11), p. 6.

[7] Kamro, M. B., (2012). Kesediaan Menceburi Kerjaya Kejuruteraan Binaan Dalam Kalangan Pelajar Jurusan Binaan Bangunan Di Sekolah Menengah Vokasional. Laporan projek, p. 14

[8] Sharudin, S. A. B., (2008). Faktor Yang Mempengaruhi Keberkesanan Pengajaran Dan Pembelajaran Di Dalam Bengkel Vokasional Di Dua Buah Sekolah Menengah Teknik Di Negeri Sembilan. Johor, Universiti Teknologi Malaysia.

[9] Amani J.& Mkumbo K.A.K, (2018). The Influence of Family Background on Career Choice among. p. 3.

[10] Zaib, Z. B., (2014). Pemilihan Kerjaya Pelajar Tingkatan 6 Atas Di Sekolah Menengah Kluster Di Kelantan. Johor, Uthm.

[11] Sipon S. (2010). Pengurusan Masalah Pelajar IPTA: Perbandingan Dua Universiti. Prosiding Seminar Kepimpinan dan Pengurusan 2010 anjuran Fakulti Kepimpinan dan Pengurusan.

[12] Chuah, K. M., (2013). Aplikasi Media Social Dalam Pembelajaran Bahasa Inggeris: Persepsi Pelajar Universiti. July, 2(1), pp. 1-9

[13] Daniel K and Felix K. (2014). The impact of School Environment and Peer Influences on Students Academic Performance in Vihiga Country, Kenya. *Education and Practice*, 5(11), pp. 1-12.

[14] Javellana, Jover and Perez, 2014. Books vs Tablets: Modern Learning Tool of Addu First year CS and IT College students, Davao: s.n.

[15] Etikan I., Musa S.A, & Alkassim R. S, (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), pp. 1-4.

[16] Olatunde N.A & Okorie V.N, (2016). Appraisal of Awareness Level of Quantity Surveying Profession among Secondary School Students in Benin City, Nigeria. *International Journal of Advanced Engineering, Management and Science (IJAEMS)*, 2(8), p. 1

[17] Chuah, K. M., (2013). Aplikasi Media Social Dalam Pembelajaran Bahasa Inggeris: Persepsi Pelajar Universiti. July, 2(1), pp. 1-9.