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Evaluation of employees' experiences in the industrial training program in the polytechnic department of Iranian industries

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Abstract
Purpose: Industrial training is a program that aims to provide supervised training within a particular time frame which can be carried out either in the private sector or in government organizations.
Research methodology: The data were analyzed using a statistical package for prediction.
Results: It was observed from the view of the lecturers that industrial training improved the student's skills in formal and informal communication, help to find a research area for their projects, and ability to socialize, and sustain the relationship. In the view of the Employees, we observed that industrial training improved the Employees' confidence in tackling problems and provides the need for continuous learning. Also, we observed that safety was the major challenge Employees faced during their internship.
Limitations: The practical and usable environment for the results of this study is the educational environment.
Contribution: We concluded that industrial training help to improve the student's ability and knowledge after their training program. We recommended that industrial training should be seen as a tool to improve Employees' abilities.
Keywords: *Industrial training, education sector, assessment, probability sampling method*
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1. Introduction

Training can be defined as an organized procedure by which people acquire knowledge or skill for a definite purpose which may be knowledge, skills, and abilities needed by a particular job or organization (M. R. Zahedi and Khanachah, 2020). Obasi (2015) defined industrial training as a program that provides pre-professional work experience with specific assignments and responsibilities. Srinivasan and Ravi (2016) also define industrial training as a program that aims to provide the best practical experience within a particular time frame. It is a program that aims to provide supervised training within a particular time frame which can be carried out either in the private sector or in government organizations (Thangaru and Kinyua, 2017). An industrial training program is a training that is participated by Employees who have theoretical knowledge and exposes them to practical knowledge (Zahedi, Akhavan, & Naghdi Khanachah, 2022). It is a training that was established in other to bridge the gap between theoretical experience and practical inclined courses in higher institutions (De Wit-de Vries, Dolfsma, van der Windt, and Gerkema, 2019). Industrial training has been applied by many countries of the world for their academic development (Nyerinde, 2020). It is known by various names such as internship programs, cooperative educational experience, work-study, etc (M. Zahedi, Abbasi, and Khanachah, 2020). Industrial training should be relevant to students' personal careers, interests, and academic courses of study (Ghorbani and Naghdi

Khanachah, 2020b). In other words, it helps to expose Employees to the real working environment (Spöttl and Windelband, 2021).

In Iran, the regulatory body responsible for the industrial training program is "the industrial training fund (I.T.F)". It was established by the federal government of Iran in 1971. It operated within its context of the enabling law decree 47 of 1971 as amended in the 2011 ITF ACT. This also led to the establishment of the "Employees Industrial Work Experience Scheme "(SIWES) in the year 1973 (ITF, 2003). Aroh (2000) opined that it was established to complement the efforts of producing graduates that are sound in the theoretical aspect, technology-proven, and practical-oriented (M. R. Zahedi and Naghdi Khanachah, 2020). The objective for which the fund was established has been pursued vigorously and efficaciously. The industrial training program has a significant impact and importance in the development of Employee's career which includes preparing the Employees for the real working situation that they may encounter after graduation and handling equipment which are not available in their institutions, enables the Employees to put their theoretical knowledge into practical practice(M. R. Zahedi and Naghdi Khanachah, 2019), enable them to have enough confidence on returning to their institution and put a balance between their practical experienced gained and their theoretical knowledge(Ghorbani and Khanachah, 2021).

Despite the numerous approach and training programs Employees attend, there is still a low level of improvement in their skills and performance. Evidence shows a wider gap between academia and the industry(M. Zahedi, Akhavan, and Naghdi Khanachah, 2022). Many issues have been raised by some Employees about the challenges encountered before a placement is secured(Zahedi et al., 2023). There are major problems militating against the improvement of Employees during their internship program which include the following: poor supervision, uncomfortable working conditions, safety, lack of accommodation, lack of communication, lack of training material, transportation, distance, limited opportunity, poor partnership between the academia and industry, the attitude of host organizations and so on (Afonja, K., and A., 2005). In most cases when the training is well done by the Employees, it makes academic activities are also beneficiary to the program because it will help to reduce the stress of explaining some terms or ambiguous terms to Employees since the Employees have been put into practice and come across the terms during their training program(M. R. Zahedi and Khanachah, 2019). Another set of beneficiaries is the construction industry, the employers of labor, the I.T.F, and the country at large because the Employees already have pre-knowledge of what is to be done(M. R. Zahedi, Naghdi Khanachah, and Zahedi, 2022), when is to be done and how to execute them, thus helps to eliminate quacks and promote professionalism in the industry(Ghorbani and Khanachah, 2020a). Thus, Industrial Training (IT) will enhance their academic performance when they know that it will improve their skill and ability(M. Zahedi, Akhavan, and Naghdi Khanachah, 2020).

The recent studies on IT includes industrial training case study of polytechnics in Ghana (Nduro, Anderson, Peprah, and Twenefour, 2015), industrial challenges drawn from Gweru polytechnic college in Zimbabwe (Wilson, 2016), technical and vocational education training in Bangladesh–Systems (Haolader, Foysol, and Clement, 2017), female participation in vocational education and training institutions Kenyan experience (Ngugi and Muthima, 2017), effect of internship Employees' perception (Yaakob¹, Ail, and Radzi, 2018), technical and vocational education training Employees' in Malaysia (Lam and Hassan, 2018), education Employees industrial work experience scheme for private institution sector (Bupo and Okiridu, 2018), technical and vocational education training in Uganda (Okumu and Bbaale, 2019), industrial training institutes in India (Ajithkumar and Pilz, 2019), role of technical and vocational education training in Zimbabwe (Shereni, 2020), vocational education training restaurant in Cambodia (Miller, 2020), industrial training institutes of government in Mumbai (Neroorkar and Gopinath, 2020), vocational education training graduates in Iran (Okolie et al., 2020), vocational education and training in India: (Pilz and Regel, 2021), and development trends in practical training of college Employees (Nazarova, Kubrushko, Alipichev, and Gryazneva, 2021).

Motivated by the above studies, we establish an assessment of Employees' experience in industrial training programs in the polytechnic sector (a case study of some selected polytechnics in Tehran-

Iran). The remaining sections are organized as follows: Methodology in section 2. Findings in section 3. Results and discussion are given in section 4. Finally, the work is concluded in section 5.

2. Research Methodology

This study targeted the population groups of ND2, HND1, and IT supervisors as respondents. The selection was stratified by random sampling techniques. This method is a probability sampling method where every item in the population has an equal chance of being included in the sample (Taherdoost, 2016). In this way, every ND2 and HND1 has the probability to be included in the study. The procedure of stratified random requires the population to be first established, and the population of the respondents will be stratified (divided) which are the ND2 and HND1 in particular. After getting the population size, the percentage will be selected based on the population (Employees of HND1 and ND2) and the sample size (no respondents) (Taherdoost, 2016). The formula goes thus,

$$\boldsymbol{n} = \frac{N}{1 + \alpha^2 \boldsymbol{N}} \qquad (3.1)$$

Where: $\boldsymbol{n}$ = Sample size, $\boldsymbol{N}$= No of population, $\boldsymbol{\alpha}$= 0.10.

2.1 Data Collection Tool

2.1.1 Course of Disciplines in Built Environment (School of Environmental Studies)

The internship program helps environmental Employees to ascertain vast knowledge in their different courses of study and help them to know their roles, duties, and obligations of their profession after graduation. The various disciplines in the built environment have different obligations relating to the industrial training program which includes architectural technology, building technology, estate management, surveying, geo-informatics, quantity surveyors, etc. On completion of the National Diploma (ND) and Higher National Diploma (HND) in their relevant course of study, the program is designed to produce technicians and technologists with emphasis on their field of study. Their function includes:

Table 1. Internship program in Built Environment (www.unesco.org)

Department	**Obligations relating to the industrial training program**
Building	To be able to supervise and manage efficiently the construction of buildings of all sizes from setting out to the completion stage Understand and interpret all kinds of project drawings e.g., architectural drawings, services drawings, and structural designs to be able to implement them on site Design and prepare working drawings, and structural drawings for medium size buildings Prepare realistic estimates in terms of cost, materials, and labor for all building works including maintenance work Carry out a survey of various kinds of existing buildings and prepare a schedule of dilapidation and repairs
Surveying and Geo-Informatics (https:// job description-career.com/ surveyors)	Prepare and maintain sketches, maps, reports, and legal descriptions of surveyors in order to describe, certify and assume liability for work done Verify the accuracy of survey data including measurements and calculations conducted at the survey Direct on conduct survey in other to establish legal boundaries for properties based on legal deeds and titles Calculate heights, depths, relative positions, property lines, and other characteristics of the terrain Adjusting surveying instruments in other to maintain accuracy
Quantity Surveying	Measure and prepare bills of quantity and contract documents for construction works Prepare final accounts for construction projects Measured as constructed works

	Interpret contract documents for all types of construction Prepare estimates for construction projects
Architecture	Carry out feasibility studies and options appraisal Preparing the design concept Preparation of tender documents Inspection of works Preparation of production information
Estate Management.	Monitoring tenancy agreement Assessing rents Budget and system management Contract negotiation

For this study, a total number of four hundred and fifty (430) questionnaires was administered for the assessment of student experience on industrial training programs in Iran, meanwhile, two hundred and ten (British Standard BS 8210) questionnaires were filled and returned, representing a response rate of 84%.

Table 2. Category of the respondents

S/N	Category	Frequency	Percentage of Participant
1	Staff	10	4.8
2	Employee	190	95.2
	Total	**200**	**100.0**

Source: Field Survey (2019)

From Table 2 above, the category of the respondents presented that students have the highest percentage of 95.2% with 200 respondents, while staff accounted for only 10 respondents which 4.8% participation.

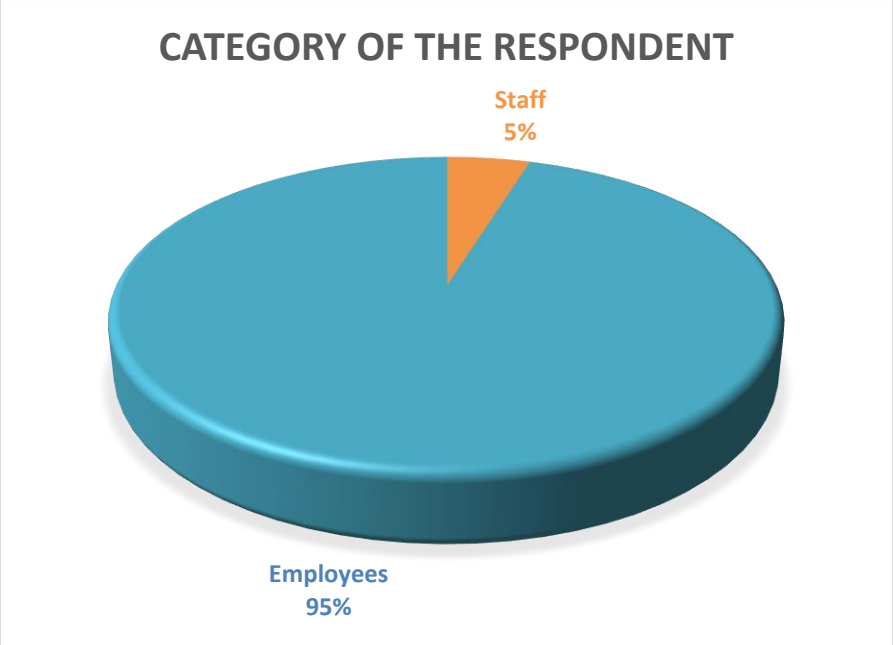

Figure 1. Category of the respondents

Demographic characteristics of the staff

Table 3. Year of experience of the staff

S/N	Year Range	Frequency	Percentage	Upper-Class Boundaries
1	Less than 1 year	0	0	1.5
2	2 - 5 years	3	30.0	5.5
3	6 - 9 years	7	70.0	9.5
4	Above 10 years	0	0	10.5 Above
	Total	**10**	**100.0**	

Source: Field Survey (2019)

In Table 3 above, the years of staff experience are presented. The majority of the staff have spent between 6-9 years and have the highest year of experience of the staff with a percentage of 70.0% with 7 respondents, respondents with 2-5 years account for 30.0% of the participant, less than 1 year and above 10 years have no representative in the study.

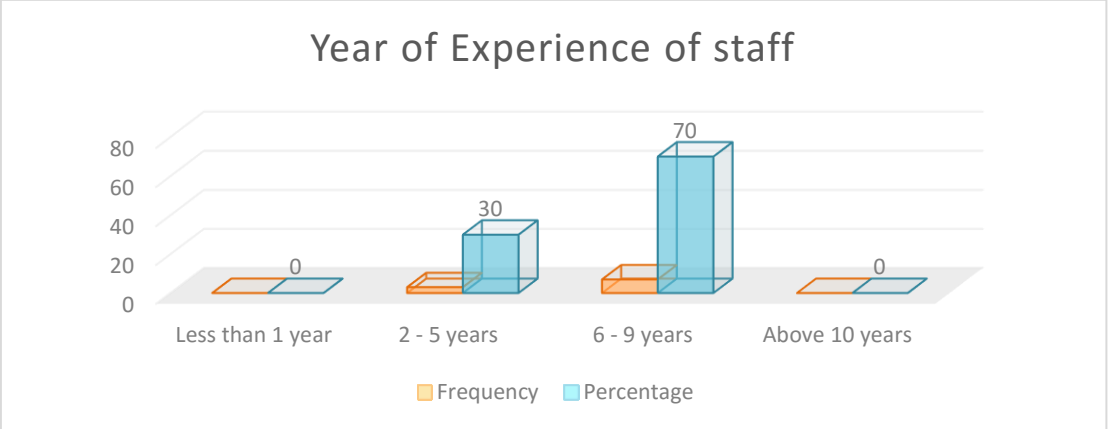

Figure 2. Year of experience of staff

Table 4. Demographic characteristics of the Employees

Department	Frequency	Percentage (%)
Architecture	2	20.0
Building	1	10.0
Estate Management	3	30.0
Quantity Surveying	2	20.0
Urban and regional planning	0	0.0
Surveying and Geoinformatics	2	20.0
Others	0	0.0
Total	10	100.0
Gender		
Male	130	65.0
Female	70	35.0
Total	**200**	**100.0**
Course		
Architecture	25	12.5
Building	40	20.0
Estate Management	50	25.0
Quantity Surveying	25	12.5
Urban and regional planning	30	15.0
Surveying and Geoinformatics	30	15.0
Others	0	0.0
Total	**200**	**100.0**
Place of Industrial Training		
Consultant	65	32.5

Contractor	54	27.0
Ministry	76	38.0
Others	5	2.5
Total	**200**	**100.0**

Source: Field Survey (2019)

From Table 4 above, the demographic characteristic of the Employees is presented. Employees from estate management have the highest percentage of 30% of participants with 3 respondents, architecture, quantity surveying, and surveying and geo-informatics has 2 respondents with 20.0% of the participant. The building department has only 1 respondent accounting for 10% of the participant, while urban and regional planning and others have no representation in the study. Both genders were represented, 65% were male and females accounted for 35% of the respondents. According to the analysis, estate management has the highest course of the student at 25% with 50 respondents, building accounts for 20% (40 respondents) urban and regional planning, and Surveying and Geo-informatics have 15% each (30 respondents), only architecture and quantity Surveying has 25 respondents accounting for 12.5% of the participants.

In terms of IT placements, Ministry has the highest place IT percentage which is 38.0% of participants (76 respondents), the consultant has 32.5% (65 respondents), the contractor has 27% (54 respondents) while others accounted for 2.5% of the respondents. Figure 2 presents the demographic characteristic of the Employees.

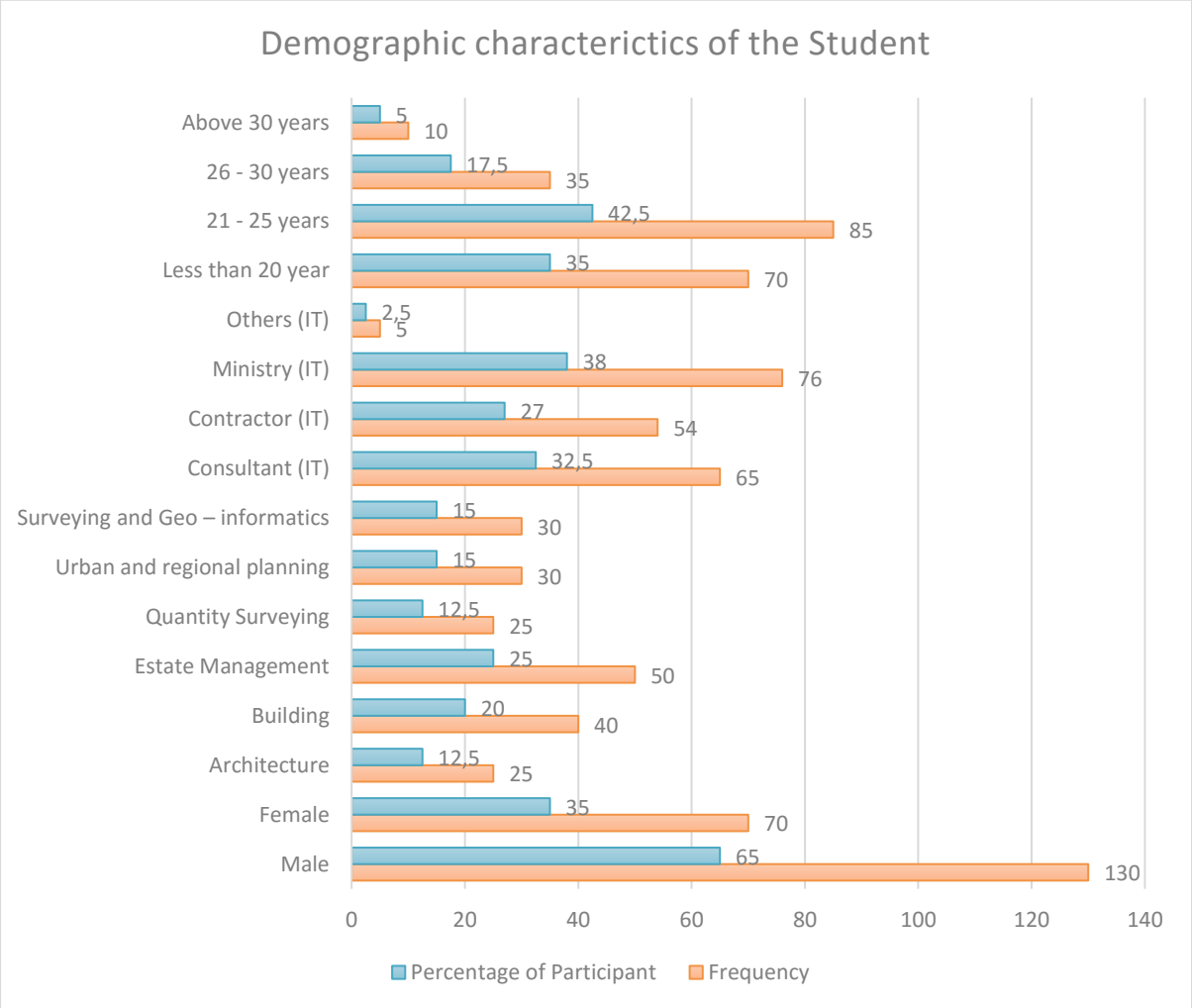

Figure 3. Demographic characteristics of the Employees

Table 5. Age of the respondent

S/N	Age	Cumulative Frequency	Frequency	Percentage	Upper-Class Boundaries
1	Less than 20years	70	70	35.0	20.5
2	21 - 25 years	155	85	42.5	25.5
3	26 - 30 years	190	35	17.5	30.5
4	Above 30 years	200	10	5.0	30.5 Above
	Total		**200**	**100.0**	

Source: Field Survey (2019)

In Table 5 above, 42.5% of the respondents were between ages 21-25 years which forms the highest age of the student, followed by the student less than 20 years old accounting for 35.0% of the respondents. Age between 26-30 years 35 respondents (17.5%) of the participant while Employees above 30 years have the least representation of 5% (Figure 4).

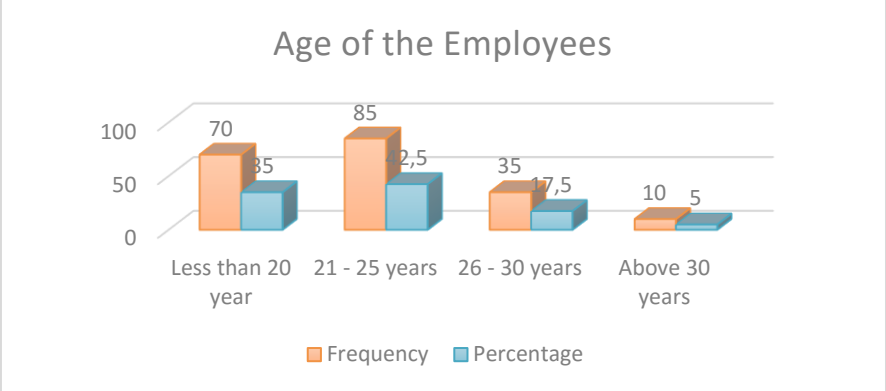

Figure 4. Demographic characteristics of the Employees

3. Results and Discussions

3.1 Impact of IT on Employees (staff perspective)

In Table 6 below, the perception of staff on the impacts of IT on the student is presented. IT assisted Employees in finding a research area for their final year project and IT exposed Employees to have an idea of life after school has the highest ranking with a relative importance index (RII = 0.92). IT exposed Employees to the changing industry culture and developments in technology and industrial training exposed Employees to the need for continuous learning and were ranked third with (RII = 0.88). IT improved Employees' knowledge and intellectual capability and IT improved Employees' understanding of the course of study ranked fifth (RII = 0.84).

Table 6 also indicates the view of staff on the skills gained during IT by Employees which indicates that IT improved Employees' skills in formal and informal written communication and has the highest ranking with RII 0.94. IT developed Employees' ability to plan and complete any assigned task ranked second with an RII of 0.92. IT developed Employees' ability to identify problems and proffer solutions, IT developed Employees' ability to work effectively with different groups, and IT improved Employees' skills in formal and informal written communication ranked third with an RII of 0.88. IT improved Employees' creativity ability and ranked sixth with an RII of 0.86. IT improved Employees' self-confidence in tackling problems and ranked seventh with an RII of 0.82.

Table 6. Impacts of IT on the Employees (staff perspective)

Variables			5	4	3	2	1	RII	Ranking
wled	1	Industrial training improved Employees' knowledge and intellectual capability	2	8	0	0	0	0.84	5th

	2	Industrial training improved Employees'2 understanding of the course of study	8	0	0	0	0.92	5th
	3	Industrial training assisted Employees in finding a6 research area for their final-year project	4	0	0	0	0.92	1st
	4	Industrial training exposed Employees to an idea6 of life after school	4	1	0	0	0.92	1st
	5	Industrial training exposed Employees to the4 changing industry culture and developments in technology	6	0	0	0	0.84	3rd
	6	Industrial training exposed Employees to the need5 for continuous learning	4	1	0	0	0.88	3rd
Skills	1	Industrial training improved Employees' creativity4 ability	5	1	0	0	0.86	6th
	2	Industrial training developed Employees' ability to4 identify problems and proffer solution	6	0	0	0	0.88	3rd
	3	Industrial training developed Employees' ability to6 plan and complete any assigned task	4	0	0	0	0.92	2nd
	4	Industrial training developed Employees' ability to4 work effectively with different groups	6	0	0	0	0.88	3rd
	5	Industrial training improved Employees' skills in4 formal and informal written communication	6	0	0	0	0.88	3rd
	6	Training improved Employees' skills in formal and8 informal written communication	1	1	0	0	0.94	1st
	7	Industrial training improved Employees' self2 confidence in tackling problems	7	1	0	0	0.82	7th
Attitude	1	Industrial training developed Employees' ability to5 socialize and sustain the relationship	5	0	0	0	0.90	1st
	2	Industrial training improved Employees' self-3 control and motivation	7	0	0	0	0.86	2nd
	3	Industrial training improved Employees' success5 consciousness	2	3	0	0	0.84	5th
	4	Industrial training increased Employees' confident3 on employment prospects	5	2	0	0	0.76	7th
	5	Industrial training improved Employees'1 perseverance in challenging situations	6	3	0	0	0.82	6th
	6	Industrial training improved Employees' time3 keeping ability	7	0	0	0	0.86	2nd
	7	Industrial training improved Employees' ability to3 work independently	7	0	0	0	0.86	2nd

Furthermore, Table 6 indicates the view of staff on attitude gained from IT by Employees which indicates that IT developed Employees' ability to socialize and sustain the relationship has the highest ranking (RII = 0.90). IT improved Employees' self-control and motivation, IT improved Employees' time keeping ability; IT improved ability to work independently ranked second (RII = 0.86). IT improved Employees' success consciousness ranked fifth (RII = 0.84). IT improved Employees' perseverance in challenging situations ranked sixth (RII = 0.82). IT increased Employees' confidence in employment prospects ranked seventh (RII = 0.76).

From indication, it was observed that knowledge has a great impact on the Employees. In the variable of knowledge, IT assisted the Employees in finding research areas for their final year project and exposed the Employees to an idea of life after school was ranked 1st based on the perception of the respondents since it helps the Employees after completing the training derive a topic for their final year project and also gives an insight of what Employees will face after graduation. In the variables of skills, IT improved Employees' skills in formal and informal written

communication were ranked 1st based on the perception of the respondents because it has helps to improve the student's ability of writing skills, and enhance their performance in communication. The respondent agreed that after having their IT, they are now confident to express their work in terms of verbal and written skills. In the variable of attitude, IT-developed Employees' ability to socialize and sustain relationships was ranked 1st based on the view of the respondent because it has improved the Employees to develop and relate with the host workers, develop an interest in the organization, improve the Employees on how to socialize with employers and staff who are already in the working industry so as to know how to tackle challenges (Figure 5).

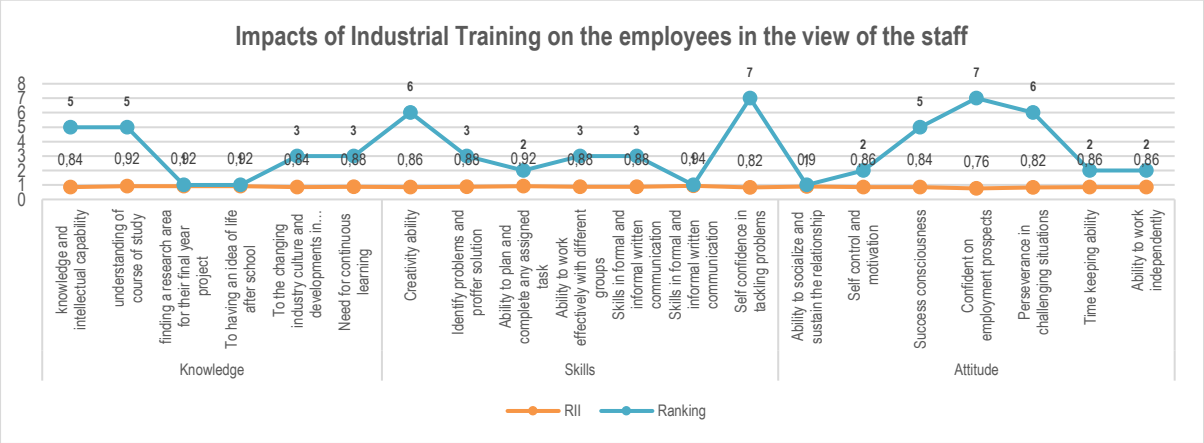

Figure 5. Impacts of IT (staff perspective)

3.2 Impacts of IT on the Employees (Employees' Perspective)

In Table 7 below, the perception of Employees is presented. Knowledge gained from IT indicates that IT exposed them to the need for continuous learning and has the highest ranking with an RII of 0.89. IT improved their knowledge and intellectual capability and ranked second with an RII of 0.88. IT improved the understanding of their course of study and ranked third with an RII of 0.88. IT exposed them to the changing industry culture and developments in technology ranked fourth with an RII of 0.87. IT exposed me to an idea of life after school ranked fifth with an RII of 0.86. IT assisted me in finding a research area for my project ranked sixth with an RII of 0.83.

Table 7 indicate Employees' skill gained from IT. According to the analysis, IT improved my self-confidence in tackling problems and has the highest ranking with RII 0.87. IT developed my ability to identify problems and proffer solutions ranked second with an RII of 0.86. IT developed my ability to plan and complete any assigned task ranked third with an RII of 0.86. IT improved my creative ability and ranked fourth with an RII of 0.84. IT improved my skills in formal and informal written communication ranking fifth with an RII of 0.82. IT developed my ability to work effectively with different groups ranked sixth with an RII of 0.81. IT improved my skills in formal and informal written communication ranking seventh with an RII of 0.80.

Lastly, in Table 7 below, the view of students on the attitude gained from IT indicates that IT improved my time-keeping ability and has the highest ranking with RII 0.87. IT improved my self-control and motivation ranking second with an RII of 0.83. IT developed my ability to socialize and sustain the relationship ranked third with an RII of 0.83. IT improved my success consciousness and ranked fourth with an RII of 0.82. IT improved my ability to work independently and ranked fifth with an RII of 0.82. IT increased my confidence in employment prospects and ranked sixth with an RII of 0.81. IT improved my perseverance in challenging situations and ranked seventh with an RII of 0.79.

Table 7. Impacts of IT on Employees (Employees' perspective)

Variables	**5**	**4**	**3**	**2**	**1**	**RII**	**Ranking**

Knowledge	1	Industrial training improved my knowledge and intellectual capability	94	100	0	6	0	0.88	2nd
	2	Industrial training improved the understanding of my course of study	83	113	0	4	0	0.88	2nd
	3	Industrial training assisted me in finding a research area for my project	55	120	25	0	0	0.83	6th
	4	Industrial training exposed me to an idea of life after school	77	111	8	4	0	0.86	5th
	5	Industrial training exposed me to the changing industry culture and developments in technology	86	100	8	6	0	0.87	4th
	6	Industrial training exposed me to the need for continuous learning	97	95	8	0	0	0.89	1st
Skills	1	Industrial training improved my creativity ability	72	101	23	4	0	0.84	4th
	2	Industrial training developed my ability to identify problems and proffer solution	91	79	30	0	0	0.86	2nd
	3	Industrial training developed my ability to plan and complete any assigned task	80	98	22	0	0	0.86	3rd
	4	Industrial training developed my ability to work effectively with different groups	43	132	21	4	0	0.81	6th
	5	Industrial training improved my skills in formal and informal written communication	56	110	30	4	0	0.82	5th
	6	Training improved my skills in formal and informal written communication	50	111	31	8	0	0.80	7th
	7	Industrial, Industrial training improved my self-confidence in tackling problems	84	104	31	8	0	0.87	1st
Attitude	1	Industrial training developed my ability to socialize and sustain the relationship	58	115	21	6	0	0.83	3rd
	2	Industrial training improved my self-control and motivation	56	117	25	2	0	0.83	2nd
	3	Industrial training improved my success consciousness	60	104	36	0	0	0.82	4th
	4	Industrial training improved my success consciousness	60	104	36	0	0	0.82	4th
	5	Industrial training increased my confidence in employment prospects	52	114	30	4	0	0.81	6th
	6	Industrial training improved my perseverance in challenging situations	38	126	26	10	0	0.79	7th
	7	Industrial training improved my ability to work independently	37	144	19	0	0	0.82	4th

Source: Field Survey (2019)

From indications on IT variables on knowledge, IT exposed me to the need for continuous learning was ranked based on the respondent perception based on the view that IT have widened their horizon and way of reasoning, it has helped the to develop more interest in their course of study and help understand clearly what academia is trying to impact them. From the variable of skills, it was observed that IT improved my self-confidence in tackling problems based on the view of the respondent, it was observed that participating in an IT program, has exposed the Employees to the likely challenges they will meet after graduation, what to expect when working, it has given them an overview of the industry will look like and how to improve the aspects the tends to fit in. From the variable of attitude, it was indicated that IT improved my timekeeping ability was ranked 1st based on the perception of the respondents because IT has made them realize the benefits of time management to studying will enhance them academically and make them fully understand what the program is all about and its importance.

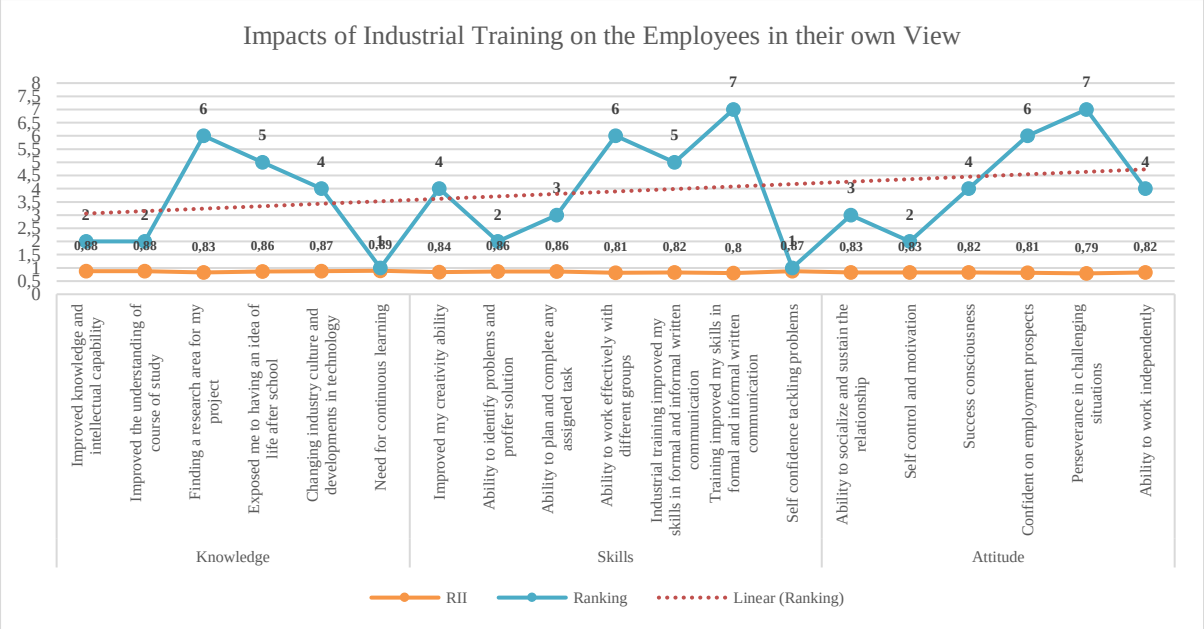

Figure 6. Impacts of IT on Employees (Employees' perspectives)

3.3 Challenges during IT

The perception of the respondent regarding the challenges during IT is presented in Table 8. The top five ranked variables were safety (R = 0.725), the commitment of the supervisor (RII = 0.705), distance from residence to the place of training (RII = 0.695), polytechnic policies (RII = 0.685), and transportation (RII = 0.685). while the least ranked were lack of training materials (RII = 0.56), trainees made to do menial jobs (RII = 0.55), and poor partnership between academia and industry (RII = 0.55). Based on the perception of the respondents, it was observed that safety was the major challenge encountered by the Employees during their internship and financial-related issues as presented in Table 8.

Safety such as hazards in the working environment as a result of the host organization, and many more. On-site, the use of a helmet should be always adhered to protect the head from injury, safety boots should be worn to avoid penetration of nails, safety gloves should be worn when dealing with electrical appliances, gobbles should be worn in the workshop to protect the eyes from injury, etc. The safety of the Employees should be ensured always including the machine and tools they work with to avoid pilfering. Based on the respondent's view, the commitment of the Supervisor is the 2nd factor in the experience, the Employees face appropriate supervision by their supervisors and low monitoring thereby leaving the Employees in doubt about the tasks assigned to them. Supervision is very essential for the success of any task. Adequate supervision and commitment of the supervisors will enable the student to know what exactly is required of them; help them realize when mistakes are made and also achieve the aim of attending industrial training from the industry, institution, and ITF. The learning institution should also get involved with trainees during their internship. Afonja et al. (2005) cited that when Employees are accepted by employers for industrial training, they are not often well supervised. Another factor is Distance from residence to the place of work which is ranked 3rd. This is commonly experienced by almost every student, their place of residence may be very far from their placement location, it's a major factor that discourages Employees from participating in the training program because it will transportation and feeding for them to cope thereby making the Employees attend the nearest placement which may be entirely different from their course of study. The polytechnic policy being the 4th factor also tends to discourage the Employees based on the respondent's perspective. Polytechnic policy such as duration of the program, assessment of their course work, and defending of what they have learned after their training makes the Employees feels that the policy is too ambiguous and therefore the Employees always feel discouraged whenever they have completed their training. Transportation being the 5th challenge the Employees encountered during their internship makes the Employees abandon the program and face whatever will fetch them

money. If little stipends are being given to the Employees for transportation, it will help to motivate the Employees from attending the program despite their location. Lack of transportation stipends can result in student absenteeism, drop-out, and low motivation. The variable of Trainees are made to made do the menial job is ranked 25th based on the respondent's view, the student is made to do some work for the host organization based on the fact that the Employees didn't pay for acquiring knowledge and are made to do some productive work for them especially the females will be sent to market to buy foodstuffs, fetch water, and another errand. The last variable which is Poor partnership between academia and the industry according to the perception of the respondent affects the Employees who are at the receiving end. When the academia fails to give the basic ideas needed by the Employees before proceeding to internship, they found it difficult to understand the terms and the course of study.

Table 8. Challenges Employees face during IT

S/N	Variables	5	4	3	2	1	RII	Ranking
1	Distance from residence to the place of training	33	40	121	16	0	0.695	3rd
2	Duration of industrial training	9	77	110	14	0	0.685	7th
3	The attitude of the host organization	7	89	94	20	0	0.685	7th
4	Remuneration during industrial training	7	78	89	32	4	0.655	10th
5	Commitment of supervisor	23	71	105	6	5	0.705	2nd
6	Polytechnic policies	18	71	100	21	0	0.685	6th
7	Transportation	20	66	103	21	0	0.685	7th
8	Safety	27	84	88	11	0	0.725	1st
9	Accommodation	26	48	97	35	4	0.655	9th
10	Lack of social activities	20	56	101	30	3	0.66	8th
11	Inadequate training opportunity	20	34	137	0	19	0.63	12th
12	Ambiguous program grading system	20	37	125	24	4	0.64	11th
13	Lack of communication	14	25	128	43	0	0.61	17th
14	Uncomfortable working environment	4	42	137	24	3	0.62	14th
15	Limited opportunity and lack of responsibility	4	35	145	23	3	0.61	17th
16	Documentation with the Industrial Training Fund (ITF)	6	51	123	27	3	0.63	13th
17	Time spent in getting a place for industrial training	9	39	131	24	7	0.62	15th
18	Poor supervision by supervisors	8	26	120	46	10	0.58	23rd
19	Lack of training materials	0	44	109	44	13	0.58	24th
20	Gender inequality	4	43	126	28	9	0.61	19th
21	The poor partnership between academia and industry	0	7	163	27	13	0.56	26th
22	Employees in host organizations feel endangered due to the presence of interns	4	59	95	42	10	0.61	19th
23	Supervisors from the school request that interns bring their logbooks for assessment rather than visiting the intern's workplace	13	30	109	50	8	0.60	21st
24	Sexual Harassment and Intimidation of Employees	3	44	114	33	16	0.59	22nd
25	Trainees are made to do menial jobs	3	12	144	40	11	0.56	25th
26	High industrial expectation	7	46	112	45	0	0.61	16th

Source: Field survey (2019)

3.4 Ways to overcome challenges during IT

The perception of the respondent regarding the ways to overcome challenges during IT is presented in Table 9 below. The rank analysis was based on RII which shows that the host should issue certificates/ recommendation letters to deserving Employees after completing training (RII = 0.88), Employees on training should be viewed as prospective assets and not threats (RII = 0.876), Employees should be well paid regularly and early (RII = 0.87) were the top three ranked ways to overcome challenges during IT. Meanwhile, the least ranked factors according to the analysis where supervisors in the industry should be given an adequate orientation regarding Employees' supervision (RII = 0.83), responses from Employees hosts should be disclosed and discussed with students (RII = 0.82), and time of IT should be changed (RII = 0.80). Generally, there is no wide gap based on RII rank on all the factors.

Table 9. Ways to overcome challenges during IT

S/N	Variables	5	4	3	2	1	RII	Ranking
1	Employees should be well paid regularly and early	104	88	14	0	4	0.87	3rd
2	Employees on training should be viewed as prospective assets and not threats	110	73	23	4	0	0.87	2nd
3	Relevant stakeholder meetings should be organized regularly	76	123	11	0	0	0.86	9th
4	Outstanding Employees should be identified, and their progress should be monitored	88	83	39	0	0	0.84	13th
5	Industrial Training Fund should assist Employees in getting placement	92	100	10	8	0	0.86	5th
6	Adequate monitoring and supervision of Employees by the industry and academia	95	96	15	4	0	0.86	6th
7	Supervisors in the industry should be given an adequate orientation regarding student supervision	67	109	30	4	0	0.83	16th
8	Responses from the student's host should be disclosed and discussed with Employees	51	130	29	0	0	0.82	17th
9	Supervisors in the industry should be monitored	68	122	20	0	0	0.84	14th
10	Employees should be monitored early and regularly	86	117	4	3	0	0.87	4th
11	There should be synergy and cooperation between industry and academia	83	108	19	0	0	0.86	10th
12	Industrial training should be a major requirement for graduation	101	75	34	0	0	0.86	7th
13	The duration of industrial training should be adjusted	92	81	28	9	0	0.84	15th
14	The time of industrial training should be changed	75	74	51	4	6	0.80	18th
15	The academia should recommend places where Employees should go for industrial training	93	83	31	3	0	0.85	12th
16	Employees should defend their reports when they complete industrial training	92	94	24	0	0	0.86	6th
17	The host should issue certificates/ recommendation letters to deserving Employees after completing the training	106	86	18	0	0	0.8	1sh
18	Employees with outstanding course(s) should be allowed to register for such course(s) during industrial training	104	71	28	7	0	0.85	11th

Source: Field Survey (2019)

3.5 Discussion

The study endeavors to provide a summary of the salient issues which represent the focus of this study. The study assesses the impact of IT on Employees from the staff's perspective and from the Employees' perspectives. The focus was majorly on knowledge, skill, and attitude. Thereafter, to

assess the challenges faced by IT Employees during the training exercise and finally looked at ways to overcome the identified challenges.

The findings presented an interesting discussion from both staff and Employees' perspectives. Knowledge, IT staff (Table 6) agreed that IT exposes Employees to the idea of life after school and to find a researchable area for their final year project. This presented a contrary opinion to the student's perspective (Table 7) but believed the impact of IT is exposure to the need for continuous learning, a better understanding of the course of study, and enhanced intellectual capability. Interestingly, both staff and students have a common ground on culture and technological developments in the industry. These findings are consistent with (Rodzalan and Saat, 2012) that the job market is increasingly emphasizing work experience in addition to academic qualifications when hiring new employees; as a result, industrial training has become a prerequisite in higher education institutions. In that, the academic knowledge becomes useful while on site and the site experience prepares the Employees for the real world. Many studies have a common ground that higher institutions are now providing Employees with the opportunity to translate the knowledge gained into practice through IT, also known as practical training or internship. The training period which lasts about six months aims to develop the skills required by the industry and this seems to become an important role to provide a quality and professional workforce. Under these skills, there is a problem with a lack of general skills. Staff believed IT improves Employees' skills in formal and informal written communication in both expression and verbal means of communication in their course of study while Employees believed IT improves self-confidence in tackling problems. However, the study sees a perfect match as the impact of IT is not limited to academic activities but also to social relationships, self-control, motivation, and the ability to plan and complete any assigned task within a specific timeframe. Employees should be paid regularly and early, from indication, it was observed that inadequate finance makes the Employees fail to sustain themselves during their internship. Lack of remuneration also leads to low motivation of the Employees, student absenteeism, and dropout. Regular and early stipend tends to motivate Employees. Employees should be monitored early and regularly according to the respondent's view will help the to be fully monitored for their primary assignment in the industry. Adequate monitoring will give the Employees full confidence and maximum guarantee of what they learn during their internship. In the 5th variable, Adequate monitoring and supervision by the industry and academia should be put in place to serve as a check for the improvement of the Employees. The industrial-based supervisor, the ITF, and academia should often visit the Employees to know about the improvement and participation of Employees. All these are consistent with many studies and have been cited as a path to improve Employees' participation in government policies.

5. Conclusion

The study was carried out to assess the student's experience in the IT program for Employees in ND2 and HND1 to know their level of experience after the internship since the aim of the scheme is to bridge the gap between theoretical experience and practical inclined courses in higher institution and to expose the Employees to the real working situation. From the view of an industrial-based supervisor, it was indicated that industrial training assists the student in finding a research area for their final year project, expose them to real-life challenges, and develop Employees' ability, to identify problems and proffer solution to problems. From the view of the Employees, it was indicated that industrial training exposed the Employees to continuous learning, improved knowledge, intellectual capability, and understanding of their course of study. From this indication, it was observed that industrial training is very beneficial to Employees and should be a major criterion and part of the curriculum for Employees before graduation. It was also observed that safety was the challenges student faced during their internship, the commitment of supervisors, distance, transportation, and accommodation were also part of the challenges. The study was carried out to assess the student's experience in the IT program for Employees in ND2 and HND1 to know their level of experience after the internship since the aim of the scheme is to bridge the gap between theoretical experience and practical inclined courses in higher institution and to expose the Employees to the real working situation. From the view of an industrial-based supervisor, it was indicated that industrial training assists the student in finding a research area for their final year project, expose them to real-life challenges, and develop Employees' ability, to identify problems and proffer solution to

problems. From the view of the Employees, it was indicated that industrial training exposed the Employees to continuous learning, improved knowledge, intellectual capability, and understanding of their course of study. From this indication, it was observed that industrial training is very beneficial to Employees and should be a major criterion and part of the curriculum for Employees before graduation. It was also observed that safety was the challenges student faced during their internship, the commitment of supervisors, distance, transportation, and accommodation were also part of the challenges.

The transfer of information and knowledge at the macro and micro levels between individuals and organizations depends on the individuals who facilitate and accelerate this transfer. As a result, all factors that encourage or hinder interpersonal communication will also affect individuals' information exchanges(M. R. Zahedi and Khanachah, 2019). Therefore, the importance of trust-based communication and interaction between individuals in the development and application of knowledge has been emphasized (M. R. Zahedi and Naghdi Khanachah, 2020). If an organization can increase the effective interactions among its employees, within the groups and organizational units, it can be more confident in the effectiveness of information exchanges between its people, and thus effective management of organizational knowledge. Therefore, creating and expanding the culture and atmosphere in the organization, that encourages this type of communication and interaction, is one of the necessities of knowledge management (Ghorbani and Khanachah, 2021).

Upon management literature, we conclude that there is no fixed and clear definition of knowledge management. The existing definitions focus mainly on the capabilities of organizations in generating wealth from knowledge-based assets and the role of knowledge management is the discover, collect, and use organizational technical knowledge to improve processes and effectively train employees (Ayoko, 2021). The process of defining, maintaining, disseminating, and accessing the knowledge produced in an organization for its members to increase productivity and efficiency and easier access to the content and knowledge produced is known as knowledge management. Therefore knowledge management has an impact on all organizational software (Mappadang et al., 2022). This impact ranges from accounting software to human capital management software and even production software.

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