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## Industrial Internship Student's Expectations and Feedback towards Student Professional Skills Development

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### Abstract

Theoretical knowledge and industry experience are crucial for the higher learning student's professional development. There was little literature previously that adopted the model or theories to find out the behavior of industrial internship students on knowledge reuse. This study aims to confirm the phenomena of knowledge reuse practice among industrial internship duration by constructing the model combination of individual characteristics, environmental, and technological factors with related knowledge reuse behavior that is able to influence the personal development of industrial students. From the survey involving 183 respondents, this research analysis shows that all six measures pass the good item-scale reliability result.

Keywords: Knowledge Management, Knowledge Reuse, Personal Development, Industrial internship Students.

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### 1.0 Introduction

The industrial internship program for the bachelor's degree students commonly exposes students to a natural working environment in their respective fields of study. Lan and Watkins (2020) have mentioned that from the student perspective, high-quality placements can bring about a range of benefits and positive impacts to the different students as they would help them attain academic performance and employability experiences. In addition, industrial internship program experience can increase students' marketability (Tonot & Othman, 2021; Sannoh, 2020; Karunaratne & Perera, 2019). The industrial internship program allows students to apply their existing practical skills and gain additional new skills. Meanwhile, the industrial internship organization or employer demands and expectations are crucial for students' job opportunities and academic program outcomes.

Jones and Stewart (2016) outline that the industry placements are viewed from the context of three different advantages it seeks to provide to the stakeholders involved. Kuh (2018) has mentioned that it benefits students, universities, and the employers involved. Seem student job placement can be related to higher learning institution responsibility too, which produces the right skill and competence level of students to align with the industries employability requirement (Abd Rahman et al., 2017). Some graduates' competencies are not suited to current employability requirements and higher institutions should improve their education programs' outcomes to overcome the skill gap. On top of that, due to the demand for high-competency and volume of potential candidates for the job, industries, and companies specifically, tend to choose among the cream. Some studies have shown the results of industry supervisors' comments on the performance

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of internship students, such as weak practical or technical skills, need to improve communication skills, and lack of confidence (Ahmad, Ali, and Sulaiman, 2018). Male and King (2019) mention that higher education tends to argue that providing adequate opportunities to the student would help them in improvised skills and knowledge, which also comprise the softer employability skills and specific technical skills. More findings on industry expectations and effective strategies in enhancing the student capability need to be adhered to achieve win-win situations between trio parties, the internship company, students, and education program ownership. The unemployment issue in Malaysia also shows an increasing trend from year to year since the 20th century, as shown in figure 1 (DOSM statistic, Jun 2021).



Fig. 1: The unemployment rate in Malaysia from 1982 -2021

In a scenario where the students are unable to gain any experience associated with the professional world, they often face difficulties in accommodating their first job placement. In this context, it becomes essential for industrial internship knowledge sharing to be added to the student and curriculum development (Abes, 2016). Such revision would ensure better outcomes for the student and prepare them well for the future. Nevertheless, it is essential to hear from students' perspectives and input on their internship experiences to synchronous with the curriculum program outcomes and ensure their strive in professional domains. Hence, the study on the students' perceptions and feedback on their expert knowledge-sharing experience during industrial internship reflects their personal development.

## 2.0 Review of literature

### 2.1 Knowledge Reuse

Knowledge reuse contains four activities or steps, as per Markus (2001). The second step involves looking for knowledge or the individuals that own the knowledge. Step three selects from the search engine results in the necessary knowledge or the individual with such knowledge, and step four relates the chosen knowledge to something like a task. The above four steps are comparable to the phases of knowledge reuse proposed by certain researchers, such as Fruchter and Demian (2002) and Majchrzak et al. (2004). The first two steps ask people to remember where and how the knowledge was recorded, while the last two steps involve people identifying that the knowledge meets their needs. Knowledge reuse is not simply the reuse of knowledge but a practice that includes the issue, meaning, knowledge accessible, and judgment based on this topic.

Knowledge reuse can be interpreted from an operational context as bringing knowledge into constructive use to solve problems and fulfill organizational objectives (Aujirapongpan et al., 2010; Kakabadse et al., 2003; Kim & Lee, 2010; Wang & Ahmed, 2005). Therefore, knowledge recipients commonly motivate knowledge reuse to help meet market needs (Petter & Randolph, 2009). Indeed, a Knowledge Management project can only be deemed a victory if it leads to the reuse of information (Baxter et al., 2008; Liu et al., 2003). Information value is understood mostly as knowledge has been used (Alavi, 2000). The following concept of knowledge reuse effectiveness can be a value decision taken by the knowledge recipient on both the effectiveness of the achievement and the degree of the achievement of its objective effectiveness by reusing knowledge (Benbya & Belbaly, 2005; Stein & Zwass, 1995).

#### 2.1.1 Student's individual characteristics

The factors of student's individual characteristics relating to Knowledge Reuse cover two measures Prior Knowledge and Self-efficiency. The Prior Knowledge analyzed the internship's prior knowledge theoretical of the course content (Karunaratne and Perera, 2019), related knowledge from the previous working experience and seminars attended before (Joshi & Tyagi, 2019), and also knowledge from the project assignment involved (Goulouze, 2017). Self-efficiency Refers to the belief of the person that he/she has abilities and knowledge that become relevant in a particular area (Gaumer Erickson & Noonan, 2018). The abilities and knowledge enable internship students to use feedback for queries and learn more by looking for solutions nearby their environment.

#### 2.2.2 Environmental factors

Two measures involve assessing Knowledge Reuse environmental factors, Course Context, and Diversity in Team Structure. Course context measures the elements of the course such as instruction (Abdulla, Mahmood, Fatah, 2019), quality of the course (Goia, Marinaş, and Igrat, 2017), a form of review, class size, the language of the study (Joshi & Tyagi, 2019), teacher encouragement, rewards, and incentives (Abdulla, Mahmood, Fatah, 2019) that affected the motivation of the student in the knowledge. Diversity in team structure measuring team dimension and their role in knowledge transfer through a subordinate structure (Joshi & Tyagi, 2019), proper mentoring

(Jaradat, 2017), mentoring among colleagues (Goia, Marinaş, and Iqret, 2017), equal and balance the role of professionalism (Jaradat, 2017). The variable in diversity in team structure will encourage the management and coordinator to see how their student's ability to work in the team can lead to personal development. Most of the survey items in this variable relate to how the industrial training students reuse their knowledge in different departments and people.

### 2.2.3 Technological Factors

Technological factors in influencing knowledge reuse reflect technological availability and perceived usefulness. "Technology availability" refers to the availability of technology that leads to a condition in which technology may be available for correspondence and sharing of information through mailing systems, web-based system utilization, and community network site (Khedhaouria & Jamal, 2015). The "technology availability" here has been used to find new knowledge and the solution to the task given during industrial training. Perceived Usefulness Technology is the level of faith an individual has when using a specific system that might improve or accelerate an individual job task or performance. The use of the technology available, intranet resources, and internet capabilities can assist internship students in familiarizing their organization content and working environment (Huang, Hwang, and Chang, 2010). A knowledge-based system has also been said to make internship students skillful (Smith, 2008).

### 2.2 Personal Developments

Personal development consists of activities that develop a person's capabilities and potential, build human capital, facilitate employability, and enhance the quality of life and the realization of dreams and aspirations. Although the terms "personal development" and "self-development" are sometimes used interchangeably, they are two distinct ways of looking at life. The first concentrates on acquiring new skills and giving life a new direction. Personal development is a structure and method used by students to reflect on and plan their personal, educational, and professional growth. Students engage in three actions as part of personal development: reflecting, planning, and implementing (Bintani, 2020). From there, we can see that knowledge reuse can influence personal development among the student during industrial training.

## 3.0 Methodology

This research used the quantitative research approach. By applying this approach, the process involved collecting and analyzing the numerical data. Quantitative research also has an approach that can evaluate objective hypotheses by analyzing the relationship between the variables. The population of this research consisted of undergraduate students that are currently in industrial training from one university only. The university that was selected was Universiti Teknologi Mara at Puncak Perdana. Even though there are many faculty in this UiTM, the target population also focused on undergraduate students in Faculty Information Management. The Information Management faculty was chosen as the study setting because all students have already thought about the foundation in knowledge management. According to data collected from the industrial training coordinator, the total number of undergraduate students currently in industry training in the Faculty Information Management in UiTM Puncak Perdana was 227. Following the recommended sample size, this research should have 143 respondents, thereby yielding a total of 183 respondents who completed the questionnaire. Due to the covid-19 pandemic, the researcher decided to distribute the questionnaire not directly to the respondents. It also disseminates the questionnaire using the Google Form to industrial training students according to the population. The measures for each item in the questionnaire are predicted according to the Likert Scale, with 1 for "Strongly Disagree" to 5 for "Strongly Agree."

## 4.0 Results

### 4.1 Descriptive analysis of

This descriptive statistical analysis was performed in order to answer a descriptive research question and achieve a descriptive research goal. However, a percentage of this analysis is always completed by computer. To determine whether the respondents in this study agree or disagree with the items used to measure variables, multiplying the total mean by the number of items was required. For example, on a Likert scale of one to five, the minimum value is one and the greatest value is five; so, on a scale of one to five, the medium value is three. It's undecided if the number is exactly three or less.

Table 1 Descriptive statistics

Section	Statement	Min	Max	Mean	SD
<b>Prior Knowledge</b>	I am able to reuse the theoretical knowledge with practices in industry training.	3	5	4.17	0.573
	I am able to reuse the knowledge from a previous students' internship experience in my industry training	1	5	4.00	0.784
	I am able to reuse the knowledge from the pre-internship seminar in my industry training.	2	5	4.02	0.671
	I am able to reuse the knowledge from project study in my industry training	2	5	4.25	0.697
<b>Self- Efficiency</b>	I use feedback to get better	2	5	4.44	0.667
	I always learn from other people's stories of success	3	5	4.4	0.637
	When I am having trouble learning a new skill, I get advice from	3	5	4.56	0.56

	people I know				
	When facing new challenges, I think about what I did to succeed in other difficult situations	2	5	4.34	0.659
<b>Course Context</b>	I reuse the knowledge when the language used in training makes it easy to understand.	3	5	4.3	0.613
	I reuse the knowledge when the relation between field of studies and field of activity	3	5	4.28	0.599
	I able to reuse the knowledge when the time of training is long enough	2	5	4.21	0.69
	I reuse the knowledge when the work assignment meets my expectation	3	5	4.26	0.661
<b>Diversity in Team Structure</b>	I am able to reuse the knowledge when provides in all core departments on a rotation basis	2	5	4.07	0.688
	I am able to reuse the knowledge when I was treated on the same professional level as the other employee	2	5	4.1	0.745
	I am able to reuse the knowledge when I have proper guidance from the internship coordinator	2	5	4.37	0.631
	I am able to reuse the knowledge when the availability of other colleagues to mentor the intern	3	5	4.22	0.626
<b>Technology Availability</b>	In my project, I often consult the documents posted on the company intranet	2	5	3.94	0.806
	In my project, I often consult knowledge-based system to improve knowledge on a topic or issue	2	5	4.05	0.724
	In my project, I often consult knowledge- based systems to find solutions for similar encountered problems.	2	5	4.1	0.712
	In my project, I often consult community network sites as advised by superiors on the internet to find useful knowledge on a topic or issue.	2	5	4.12	0.708
<b>Perceived Usefulness Technology</b>	I think that technology available in the company is helpful during my industrial training	2	5	4.19	0.727
	I think the company intranet help me better understanding the organization contents	2	5	4.15	0.733
	Using the Internet would make it easier for me to study during industrial training	3	5	4.44	0.616
	It was easy for me to become skillful when using the knowledge-based system as advised by my internship colleagues or supervisors	3	5	4.22	0.599
<b>Personal Development</b>	Knowledge reuse increase my self- confidence	3	5	4.39	0.591
	Knowledge reuse contributing me to professional	3	5	4.37	0.615
	Knowledge reuse improvements of interpersonal and teamwork skills	3	5	4.45	0.59
	Knowledge reuse give me networking opportunities	3	5	4.37	0.613

The researchers can conclude that the respondents in this study are indecisive on all of the variables measured, but if the value is greater than three, it enters the zone of agreement. From the table above, the overall mean for each item exceeds the value of 3.00 with a minimum value of 3.94 for item "In my project, I often consult the documents posted on the company Intranet". The item that occupied the highest mean of 4.56 among the 24 factors for internship student development is "When I am having trouble learning a new skill, I get advice from people I know" followed by "I use feedback to get better" scored 4.44. Both items are from self-efficiency measures. Generally, the study's respondents agree with all the statements provided during the survey.

#### 4.2 Reliability Analysis

The strength of the scale's internal consistency was determined using reliability analyses. Table 2 reveals that the reliability analysis for each construct in this study ranges from 0.793 to 0.912, which is higher than the recommended cut-off value of 0.7. As an outcome, the scale applied in this investigation was highly reliable.

Table 2 Reliability Analysis

Variables	No. of Items	Cronbach's Alpha
Personal Development	4	0.912
Prior Knowledge	4	0.827
Self-Efficiency	4	0.821
Course Context	4	0.840
Diversity in Team Structure	4	0.845
Technology Availability	4	0.873
Perceived Usefulness Technology	4	0.793

All known Cronbach's Alpha assessed the reliability of each multiple-item scale. Nunnally (1978: 245) recommended that "alpha values should be 0.70 or greater". The results of Cronbach's Alpha for all six factors for knowledge reuse are above 0.80 and personal development is 0.912, indicating that the overall questionnaire items have good reliability.

## 5.0 Discussion

A student's individual characteristic is important for good to have as a graduated student. The importance for students that apply good characteristics can make them give full commitment and responsibility in their studies and potential job tasks. The respondents mostly very much agree that they are able to reuse theoretical knowledge with practice in industry training. The research from Karunaratne and Perera (2019), also show that internship training students that are related to the course can give more effectiveness to an internship program. The key result of prior knowledge from previous students' experience in their industry training knowledge, especially previous experience, really helps in knowledge reuse. By seeing the finding also, the seminar that was provided by the university made it possible for students to reuse in their industry training. Most of the findings in the research by Joshi, S. and Tyagi, H.(2019) shows students strongly agree that Universiti should do training & seminar before the students go for industrial training.

The environmental factors in this finding include the course context and diversity in team structures. Most of the respondents agree that they are starting to reuse the knowledge when the language used in the training makes it easy to understand. According to Joshi. and Tyagi (2019), challenges in terms of language also will influence the performance of students in industrial training. Most companies in Malaysia have used English and Bahasa Melayu as their main communication language in the organization. The relation between fields of studies and fields of activity is also an important point that encourages the respondents to reuse the knowledge. Bintani (2020) in their results found the best reflection that field studies knowledge really helps in the contribution of activity during work. In the research Abdullah et al., (2019), discovered that for most of the respondents, the time period worked long enough, and work assignments related to the skill really impacted their personal developments.

Technological factors are the impact of new methods and equipment on technology that can affect their daily activities. In this research, the technological factors are divided into two variables such as technological availability and perceived usefulness of technology. Company Intranet can give the industrial training students the total overview of the company. The respondents also often consult knowledge-based systems to improve their knowledge of topics or issues in their projects. The evaluation of these items can discover that most of the organizations already applied the knowledge-based system in their work. Butarbutar. (2021), said that the application system in the organization can make the work more efficient and effective. According to Han & Anantatmula, (2007), boosting access to these technologies might easily enhance employee information searching. The correlation of the analysis between technological availability and personal development is really significant as and connection between two continuous variables.

## 6.0 Conclusion

The primary purpose of this study has been to examine the knowledge reuse behavior among industrial students. The research framework consists of six independent variables (Prior knowledge, self-efficiency, course context, diversity in team structure, technology availability, and perceived usefulness of technology) and one dependent variable (Personal development among industrial students). Prior knowledge, diversity in team structure, and technology availability are three insignificant antecedents to personal development. Most variables and items are still significant to knowledge reuse behavior in this context. According to the study's findings, there will be various opportunities to be included in future research on knowledge reuse behavior and personal development among industrial training students.

First and foremost, knowledge reuse can add value to the individual and organization. From this study, four items were constructed for each variable. It is suitable for future research to have more numbers of items in the survey question for each variable. Perhaps the enlargement of the findings may be revealed during analysis. Future research can also add other factors that contribute to knowledge reuse behavior and impact personal development. In fact that the limitation of the study was that the time spent completing this research is limited. The researchers only had four months to finish the investigation. In the short term, the time allotted for data collection via surveys may be insufficient. It is suggested for future studies that conduct the same study but with a larger sample size. An extensive sample size and perhaps the most efficient period for upcoming studies are needed to enable additional participants to participate.

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