Internship Experience in Health Information Management and Technology: The Perspective of Interns

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Abstract: Background: The internship program, which has become an integral component of the undergraduate curriculum, is considered beneficial not only to students, but also to educational and business sectors. Objectives: The main objective of this study was to investigate the view of interns on their internship experiences at different hospital settings during their internship year. Methods: A cross-sectional study was conducted in the hospitals where the interns of Health Information Management and Technology (HIMT) program were undertaking their rotations. At the time of the study, the internship rotations were in progress at such multiple hospital sites/sections as quality, medical record, and health informatics. A questionnaire, with a five-point Likert scale was used. It comprised 27 statements grouped into four dimensions: supervisors, personal growth, working environment, and skills development. Results: The majority of interns were satisfied with their supervisors. A majority of interns also reported that their internship experience had helped to develop such skills and attributes as communication, self-confidence, independence and their ability to solve problems. However, their reported satisfaction with their working environment was low. In addition, nearly sixty percent of interns rated the actual value of the internship experience as a minimal to no value. Conclusions: Most of the participants in this study demonstrated satisfaction with their supervisors and their skills development. However, they were unhappy with their working environment and their actual internship experiences. [Mona Faisal Al-Qahtani, Maha Aljasser, Rawan Almansour, Haifa Alsunaid, Abier Alharbi. Internship Experience in Health Information Management and Technology: The Perspective of Interns. J Am Sci 2012;8(12):1153-1159]. (ISSN: 1545-1003). http://www.jofamericanscience.org 157

Keywords: Internship; Interns; Health information Management Management

1. Introduction

Researchers generally agree that the internship year is a crucial period for students to take decisions on their future careers/jobs and acquire skills in communication and practice in teamwork. [1] It is also professed as a most important transition period when there is a sudden increase in both work load and responsibility, when performance translates from 'knowing' to 'doing'. [2] In addition, it is a chance to integrate a job- related experience into education with the involvement in planning and supervision. [3] According to Furco [4, p.11] “Internship programs engage students in service activities primarily for the purpose of providing students with hands-on experiences that enhance their learning or understanding of issues relevant to a particular area of study”.

There is no doubt that the internship experience itself provides benefits not only to students, but also to all parties involved such as the educational institutions and business organizations. For students, the experience provides a forum to apply the knowledge and skills they have acquired in the classroom, to engage in real life job-related issues, to enhance their awareness of career opportunities, and to develop self-confidence and such skills as are required in the workplace including technical, communication and negotiating skills. [5, 6] For industry, internship provides employers with a means to evaluate students for potential positions in their establishments; helps to select the best talent and quality candidates; gives them the benefit of students' ideas and energy in conducting job-related projects. [5, 6, 7] For educators, internships could be a valuable resource to reflect on and assess educational output; provide a means of collaboration between education and industry, by providing an opportunity to benefit from employers' feedback on the extent of the preparedness of the potential future employees, and provide a means to raise the profile of the university. [3, 6, 7]

The literature highlights the importance of assessing the interns' perceptions of their experiences in the working environment and the extent to which learning opportunities could be made available to them. This assessment can be used by educators as a basis to help identify the weaknesses/limitations of the curriculum and better prepare students for their profession in the real world. It can also be used by educational institutions as a feedback on the skills and competencies required in the job market. [1, 6]
The Department of Health Information Management and Technology (HIMT) was set up in the College of Applied Medical Sciences at the University of Dammam in 2003. At present, only female students are enrolled. The undergraduate HIMT program is a four-year program plus twelve months of internship in Saudi Arabia. One main instructional tool in this program is the involvement of the fourth year students in conducting a graduate research project with faculty members. The internship experience forms the cornerstone of the HIMT program. Students are required to undertake three rotations during this internship year in the following areas: medical record, quality improvement, and information technology. Each rotation is for four months.

The HIMT program at the University of Dammam is a distinct program within the Applied Medical Sciences. This distinctiveness is manifested by the demand for a compulsory graduation project, the data of which are to be collected from the field in real life. Another feature is that the graduates of the HIMT program form a link between health workers and the Information Technology (IT) department. Their ability to work in Quality Improvement (QI) department, and also understand the entire process of Medical Record (MR), enables them to be part of the team for the implementation of the electronic medical record project. Up to the present study, there have been three graduations: in 2007, 2008, and 2009. However, to the best of the author's knowledge, there has been no official evaluation of Interns' perceptions of their internship experiences.

The main objective of this study was to investigate the views of interns on their internship experiences at the different settings during their internship year.  

2. Material and Methods

Study Setting

The study was conducted at hospitals where interns of HIMT were undertaking their rotations at such different hospital departments as Quality Improvement, Medical Record and Health Informatics. The internship rotations were still ongoing at the time of the study. The hospitals were as follows: governmental (three), military (two), and private (two) hospitals in the Eastern Region, Saudi Arabia.

Study Design

A cross-sectional study during the period between April 1st and the end of May, 2010.

Target population and sample size

The target population was all HIMT internship students who had graduated in 2009 (N=24). A total of 24 out of 24 surveys were completed by interns yielding a 100% response rate.

Data Collection Tools

The questionnaires were delivered either personally (self-administered) or by e-mails. Approximately 15-20 minutes was required for completion of the questionnaires.

Instrument

A questionnaire was developed with statements that had been adopted and or modified from various international surveys. [8-10] In addition, some statements were based on the relevant literature review, informal interviews with some participants, and the booklet 'Learning goals and objectives of HIMT- Course Curriculum'. The questionnaire involved 27 statements in two groups. The first part intended to explore the perceptions of interns of their supervisors (statements number 2, 18, 19), their personal growth (statements number 3, 5, 7, 8, 9, 10, 13, 14, 20, 21, 22), and their working environment (statements number 1, 4, 6, 11, 12, 15, 16, 17). A Likert scale ranging from 1-5 was used as follows: 1 = strongly disagree to 5 = strongly agree.

The second part aimed to find out the extent to which interns believed that their actual internship experience contributed to the development of different skills (statements number 23, 24, 25, 26, 27). A Likert scale ranging from 1-5 was used as follows: 1 = No development, 2 = some development, 3 = Average. 4 = Good development, 5 = Extensive development.

Four open-ended questions were also included to elicit interns' views on the value of the actual internship experience, how they have been affected by the experience, what they consider their most significant professional strengths, and whether they would recommend the hiring of someone with their background into their organization if they were employers. Furthermore, demographic variables including age, graduation year, and the internship site were collected (Appendix A).

Statistical analysis

A non-parametric statistical analysis using the Statistical Package for Social Sciences (SPSS, IBM, Chicago, Illinois, USA) version 16 was performed. A descriptive analysis was used for the closed-ended questions. The open-ended responses were organized by using basic analysis to identify meaningful patterns in the data. The analysis involved the following steps. First, the response of each participant for a single open-ended question was read, and response emergent categories/themes identified. Second, the responses were classified into one of the categories/themes already identified. Two of the researchers of this study worked individually to sort out the responses into identified categories.
This was done to look for any similarities or differences. The process was repeated until no major differences were found in the sorting out of the responses. Third, statements were formulated to reflect the content of all the responses in each category, and the number of responses in each category were counted and reported. Cronbach’s alpha coefficient was used to assess the internal consistency of the questionnaire and the Microsoft Office Excel Version 2003 was used for graphic presentation of data. A pilot study was conducted with a group of five senior (4th year HIMT) students at the end of their academic year, April 2010, to ascertain any possible ambiguities in the surveys. The result showed that the survey was clear and that there was no ceiling or floor effect in the pilot study.

3. Results

Demographic data

There were 24 internship students working in different hospital departments. Nearly 60% of them worked in governmental hospitals, 25% at military hospitals, and 17% at private hospitals. Their ages ranged from 21 – 24 years.

Reliability of the Survey

The Cronbach’s alpha reliability coefficients of subscales were as follows: working environment (α= .629), personal growth (α= .824), supervisor (α= .458), skills development (α= .793), and the overall survey (α= .897). The Cronbach's alpha reliability coefficients of both the working environment and supervision were average to high. For skills development, personal growth, and overall subscales, the Cronbach’s alpha reliability coefficients were high to very high.

Descriptive Analysis for the Subscales of the Survey

Table 1 shows on the subscale of the questionnaire, that the highest mean score was accorded to the ‘Supervisor’ subscales (3.89). The lowest mean score went to the ‘Working Environment’ (3.09).

Table 1: Descriptive Analysis for the Subscales of the Survey (Min, Minimum; Max, Maximum; M, Mean; SD, Standard Deviation)

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Min</th>
<th>Max</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Environment</td>
<td>2.25</td>
<td>4.25</td>
<td>3.09</td>
<td>.594</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>1.73</td>
<td>4.55</td>
<td>3.18</td>
<td>.670</td>
</tr>
<tr>
<td>Supervisor</td>
<td>2.33</td>
<td>5.00</td>
<td>3.89</td>
<td>.649</td>
</tr>
<tr>
<td>Skill Development</td>
<td>1.00</td>
<td>5.00</td>
<td>3.30</td>
<td>.898</td>
</tr>
</tbody>
</table>

Descriptive Analysis of individual statements of the Survey

Table (2) summarizes the interns’ perceptions on each statement. The five most highly rated statements were statement numbers 2, 6R, 18, 19, and 27 (means ≥ 3.7). The five lowest rated statements were numbers 10R, 14, 15, 22, and 26 (means ranged between 2.5 and 2.9). The table shows that interns were more in agreement than disagreement with most remaining statements (means ranged between 3.0 and 3.5).

Open-ended questions

*How would you rate the overall value of the actual internship experience? Why?*

About 13% of interns rated the internship experience as high. This may be because the interns had the chance of hands-on experience before getting a job, which allowed them to avoid some mistakes and perform better in their jobs. It is also possible that the experience of learning new skills during the medical record and quality rotations had made the experience more rewarding (Figure 1).

Approximately 29% of the interns assessed the internship experience as moderate giving the following reasons: Some workers/supervisors at their hospital were busy with their normal work or new projects that obviously were more important than spending time with the interns. It could also be that the hospital departments were either not interested in training interns and/or did not have enough experience of the HIMT specialty.

Around 46% of interns rated the internship experience as of minimum value. Their main reasons were that most of the supervisors in the hospital had no idea about the HIMT specialty and therefore did not give them much work. There also seemed to be a lack of coordination between the HIMT department at the university and the hospitals on what the interns were expected to do during their internship. There were no clear guidelines on responsibilities, activities, assignments. Besides, the employers in the hospitals had no incentives to motivate them to train the interns. Since the hospital authorities did not know much about the nature of the HIMT major they were unprepared for the students. The interns, therefore, gained very little experience from their rotations. To reach their desired goal they had to put into practice what they had learned under earnest supervision, which was unfortunately largely absent.

Finally, 12% of the interns believed that the internship had no value. The reasons they gave were that as interns they did nothing to improve the skills they already had. In the IT rotation they worked in a call center only, while the MR rotation was the same as professional experience. They had no work at all in the quality rotation.
In what way(s) have you changed as a result of this experience? (i.e. new skills, self-discoveries, career awareness, etc.?)

Almost 60% of the interns indicated that they had changed as a result of the experience. This change had occurred in learning new skills (in gaining self-confidence, becoming more independent, improving in communication and problem solving skills); in career awareness; dealing with different types of people; and adapting to the work environment. For 40% of them the experience had not made any difference to them.

What do you consider your most significant professional strengths?

The majority of the interns thought the most significant strengths they had gained in the internship rotations were as follows: (a) the vitality to work hard and fast, (b) good performance in the medical record department, (c) patience in dealing with people, (d) improved communication skills, (e) ability to learn fast and a greater willingness to learn, (f) working as a liaison between information science, computer science, and health care, (g) motivation for competitiveness and hard work, and (h) ability to search for knowledge or information.

Hypothetically, if your organization had an opening for a person with the background you have, would you hire him/her? Why or why not?

Almost fifty percent of the interns said they would hire interns with backgrounds similar to their own. Their reasons for this were that: interns became knowledgeable with good experience in diverse subjects (Information technology, medical record and quality). They had the qualifications, the ability, and the potential for such a position. The experience they had had as interns was good and realistic; new knowledge, backgrounds in different areas including the ability to make decisions.

Only 13% of the interns were reluctant/or uncertain about hiring interns with backgrounds similar to theirs. Their uncertainty was based on the lack experience on the part of the interns', wanting motivation, deficient in the skills required in the potential company. They also suggested having a three-month trial period for the new interns to find out the extent to which they were willing to learn and be trained and work hard.

On the other hand, 21% of interns said they wouldn't hire a person with their background. The main reason was that they were inefficient, with little to no experience at all, except what they gained in Medical Record.

4. Discussions

The result revealed that interns were pleased with the "supervisor" subscale. Interns thought their supervisors were friendly, helpful and available to give assistance during the internship.

Although interns expressed their dissatisfaction with the quality of their internship experience, they indicated more agreement than disagreement with the view that the experience developed their ability to work in a team and solve problems, and sharpened their analytical skills. The dissatisfaction with the internship experience accords with the finding by Muhamad et al [11] stating that interns perceived the internship experience as not having provided them with the expected benefits. The results of this study also show that interns agreed more than disagreed with the statement that the experience gave them a realistic preview of their chosen career. This result supports Lam and Ching [12], who found that internship was valuable in giving students with an insight into their career choice.

However, one statement stood out as discouraging. Most interns agreed somewhat with the statement that "I usually had a clear idea of what I was doing and where I was going in the internship". Their responses highlight the important of providing interns with a clear 'learning contract' that involves a description of their responsibilities as interns or their job description, goals and objectives, and how these will be met and assessed.

Interns had very little satisfaction with their working environment in general. They were unhappy with the availability of the documents they had to work with and other resources needed. They were dissatisfied with the amount of time they were given to assimilate what they were supposed to do in the internship, and also with the hospital personnel who seemed not to understand the challenges the interns had to face in their jobs. They also complained of having a workload that was too heavy, and that the
internship revealed a huge gap between theoretical knowledge in the classroom and the real world of work. The low satisfaction of our interns with their working environment is in harmony with the results of other studies that propose that interns with neither the skills nor enough knowledge generally felt unprepared or ill-equipped for the responsibilities of their new role in the workplace.\[13, 14\]

On the other hand, our interns appreciated having a working environment that gave them the opportunity to use information and communication technologies. This finding contrasts with the results found by Muhamad et al \[11\] in which interns responded that they had not had the appropriate exposure to the latest technology used in their working environment.

Interns revealed more positive than negative views on the part played by internship experience in developing their qualities and skills in terms of their willingness to learn more about their chosen career, to make ethical judgments, to be flexible and be able to adapt to different situations at work, and acquire lifelong learning skills. In addition, the result of the open-ended questions showed that the majority of interns believed that the internship helped them to learn new skills; enhanced their career awareness, taught them how to deal with different kinds of people, and developed their communication and problem solving skills, and improved their self-confidence. This result conflicts with the findings by Muhamad et al \[11\] who claimed that the internship failed to enhance interns' interpersonal skills. However, the result supports the findings by Abu Bakar et al \[3\] and Lam and Ching \[12\] who found that the internship experience was able to improve students' soft skills.

Table 2: Descriptive Analysis of Individual Statement of The Internship Survey

<table>
<thead>
<tr>
<th>n.</th>
<th>Statement</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I was given the opportunity to use information and communication technologies during my internship.</td>
<td>2.00</td>
<td>5.00</td>
<td>3.42</td>
<td>1.10</td>
</tr>
<tr>
<td>2</td>
<td>The supervisor was friendly and helpful during internship.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.96</td>
<td>1.08</td>
</tr>
<tr>
<td>3</td>
<td>The internship rules were clear to me.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.71</td>
<td>1.16</td>
</tr>
<tr>
<td>4</td>
<td>The work environment allowed me to work well.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.21</td>
<td>1.38</td>
</tr>
<tr>
<td>5</td>
<td>The diversity within HIMT program class enhanced my training and skills to work with individuals from different backgrounds.</td>
<td>2.00</td>
<td>5.00</td>
<td>3.50</td>
<td>.88</td>
</tr>
<tr>
<td>6R</td>
<td>The workload in the internship was too heavy.</td>
<td>2.00</td>
<td>5.00</td>
<td>3.79</td>
<td>.93</td>
</tr>
<tr>
<td>7</td>
<td>The experience sharpened my analytical skills.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.21</td>
<td>.97</td>
</tr>
<tr>
<td>8</td>
<td>I usually had a clear idea of what I was doing and where I was going in the internship.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.04</td>
<td>1.12</td>
</tr>
<tr>
<td>9</td>
<td>The experience helped me to develop my ability to work as a member of a team.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.54</td>
<td>1.02</td>
</tr>
<tr>
<td>10R</td>
<td>In the internship I was seen as an extra pair of hands rather than as a developing professional.</td>
<td>1.00</td>
<td>4.00</td>
<td>2.54</td>
<td>.97</td>
</tr>
<tr>
<td>11</td>
<td>I was generally given enough time to understand the things I had to learn to do in the internship.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.29</td>
<td>.99</td>
</tr>
<tr>
<td>12</td>
<td>The people in the hospital made a real effort to understand any challenges that I had.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.25</td>
<td>1.03</td>
</tr>
<tr>
<td>13</td>
<td>The internship helped to develop my ability to solve problems.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.33</td>
<td>1.00</td>
</tr>
<tr>
<td>14</td>
<td>In the internship, I was helped to develop the ability to plan and organize my day-to-day work.</td>
<td>1.00</td>
<td>5.00</td>
<td>2.88</td>
<td>1.19</td>
</tr>
<tr>
<td>15</td>
<td>I applied classroom theoretical knowledge during this internship.</td>
<td>1.00</td>
<td>5.00</td>
<td>2.92</td>
<td>1.21</td>
</tr>
<tr>
<td>16</td>
<td>I was motivated to do my best work in the internship.</td>
<td>2.00</td>
<td>5.00</td>
<td>3.38</td>
<td>1.05</td>
</tr>
<tr>
<td>17</td>
<td>Paperwork (contract, work log) was available and easy to use (via website, staff, class).</td>
<td>1.00</td>
<td>5.00</td>
<td>3.04</td>
<td>1.08</td>
</tr>
<tr>
<td>18</td>
<td>The supervisor of interns was available to give assistance prior to internship.</td>
<td>2.00</td>
<td>5.00</td>
<td>3.79</td>
<td>.88</td>
</tr>
<tr>
<td>19</td>
<td>The supervisor of interns was available to assist in the course of the internship.</td>
<td>2.00</td>
<td>5.00</td>
<td>3.92</td>
<td>.88</td>
</tr>
<tr>
<td>20</td>
<td>This experience gave me a realistic preview of my field of study.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.25</td>
<td>1.29</td>
</tr>
<tr>
<td>21</td>
<td>I learned new skills during this internship.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.38</td>
<td>1.13</td>
</tr>
<tr>
<td>22</td>
<td>Overall, I was satisfied with the quality of my internship experience.</td>
<td>1.00</td>
<td>5.00</td>
<td>2.62</td>
<td>1.31</td>
</tr>
<tr>
<td>23</td>
<td>A willingness to learn more about your field of study</td>
<td>1.00</td>
<td>5.00</td>
<td>3.04</td>
<td>1.23</td>
</tr>
<tr>
<td>24</td>
<td>Flexibility and adaptability.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.25</td>
<td>1.11</td>
</tr>
<tr>
<td>25</td>
<td>Ethical judgment making.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.46</td>
<td>1.10</td>
</tr>
<tr>
<td>26</td>
<td>Skills to implement change.</td>
<td>1.00</td>
<td>5.00</td>
<td>2.79</td>
<td>1.28</td>
</tr>
<tr>
<td>27</td>
<td>A desire to continue learning in the future.</td>
<td>1.00</td>
<td>5.00</td>
<td>3.96</td>
<td>1.36</td>
</tr>
</tbody>
</table>
5. Conclusion

This study was carried out to investigate HIMT interns' perceptions of their internship experience. One interesting result of the survey was the low overall evaluation of their actual internship experience in spite of the overall high rating of their satisfaction with the supervisors. The survey has shown that a majority of interns were satisfied with the part played by their internship in developing analytic capabilities, problem solving, and communication skills. However, they were dissatisfied with the heavy workload they were given and the extent to which classroom theoretical knowledge was used during their rotations.

6. Recommendations

From the results of this study, it is recommended that:

First, the Coordinator for Students Training Affairs for the HIMT department, should strengthen the cooperation between the university and the training hospitals with regard to the evaluation of performance in internship. A completed evaluation form on the interns' performance in every rotation at the hospital should be sent to the university to document the actual performance.

Secondly, the Coordinator of Students Training Affairs for HIMT department, and the hospital supervisor should cooperate to formulate the internship training program and evaluate the performance of the training supervisors. It is also recommended that the supervisors at the hospitals responsible for training the interns be given some incentives to show appreciation for their work and encourage them to put more zeal and enthusiasm in training and supervising our interns.

Thirdly, it is also recommended that a committee be formed to advertise and promote the HIMT program. This committee could consist of a variety members such as: (a) faculty from HIMT department, (b) representatives from the health ministry, and (c) a representative of the HIMT student body to make the public aware of the HIMT Program, a sample of HIMT graduation project should be publicized at national or international events, national workshops, conferences, etc.

Finally, further studies are recommended to evaluate the perception of employers of the performance of the interns, tomorrow's alumni and future employees, to find out any gaps that exist between their university education and actual practice in the work place. Such an evaluation could be the basis for modification of the internship training program.

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Appendix A: Interns Perceptions Survey

The purpose of this survey is to explore the perceptions of interns’ of their learning experiences as a graduate of the Health Information Management and Technology Program at The University of Dammam. Kindly fill up this survey, honestly, and thoughtfully. Your answers are confidential and will be used only for program enhancement.

1) Please indicate your Age:
2) Your graduation year:
3) Your internship site (The name of your hospital):
4) Hypothetically, if your organization had an opening for a person with the background of this intern, would you hire him/her? Why or why not?

C. Finally, please answer the following questions:

(1) How would you rate the overall value of the actual internship experience?
   o High value.
   o Moderate value.
   o Minimum value.
   o No value.

Why?

(2) In what way(s) have you changed as a result of this experience? (i.e. new skills, self-discoveries, career awareness, etc.)?

(3) What do you consider the student’s most significant strengths professionally?

(4) Hypothetically, if your organization had an opening for a person with the background of this intern, would you hire him/her? Why or why not?

9/12/2012