DISTANCE CONTROLLED ON THE JOB TRAINING

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ABSTRACT
On- the job- training (OJT) is now becoming an important part of many branches of the higher education in particular for engineering and natural sciences. Some programmes allocate half to one year for on the job training. The human resources departments are looking for the content and the place of the on the job training during the interviews with newly graduated applicants. Most technical universities provide students not only with theoretical knowledge on their majors but also practical training on their profession to satisfy the industry which deploys these graduates. Nowadays on the job training is executed in defined periods in the work places but under the supervision of academicians according to national and international standards. This research is based on the investigation of the conduct, control and assessment xxx on the job training using distance learning techniques in particular training conducted in far-away distance areas from the education institutes. This study not only will help to create a distance controlled training system but also will provide essential data for planning and conducting a feasible on the job training which combines efforts of the trainees at the site and lecturer at the schools.
Key Words: Vocational Training, Academic Education, Training Standards, On the Job Training, Work-based learning (WBL)

INTRODUCTION:

On the Job Training (OJT) means having a person learn a job by actual performing it on the job. Virtually every employee, from mailroom clerk to company president, gets some on-the-job training when he or she starts a job. The trainee works under the guidance of an experienced worker who advises and trains the new worker. This is often called the *coaching* or *understudies* method. Sometimes this just involves having trainees observe the supervisor to develop the skills for running a machine, for example (Reinecke, 1998).

On the Job Training (OJT) is an integral part of most types of education that aims to students to build their job skills to find jobs. The students will familiarize themselves with their future jobs, understand their role in the business, assess their strengths/weakness and learn their needs on the subject and gain preferences to help them getting a job easily.

In line with education programme and courses, the education institutions prepare their On the Job Training programmes in coordination with respective sectorial organizations, such as institutes, worker federations, chambers etc. So these programmes meet both academic qualifications and requirements of the subject work areas.

In many work areas the OJT is an integral part of course programmes and assessed as a part of academic programmes of education institutions. Today in most areas students are obliged to complete successfully OJT to complete their education. This training is normally conducted at suitable work places and should be assessed by both the staff of the work place and lecturers of the schools. The training records including evidence book prepared by students and evaluation records of the work place staff are sent to schools then lecturers at the school make interviews with cadets to verify their achievements and make the final assessment. The work places which OJT will be conducted are generally selected by the schools pending upon suitability for training and, the students are mostly controlled by lecturers during their OJT if the conditions allow.

In order to ensure the quality of the OJT, education institutes should control the students at their working places as well as establishment of good coordination with the trainees at the OJT sites. Most of the OJT places are far away from the education centres. As a good example you can see the OJT places of maritime students of a university who are distributed the ships worldwide in the Figure-1. A distance controlled training system may be used to control the students, coordination between lecturers and trainees at the site and provide assurance of the system.

Figure 1: The OJT sites (ships) of Maritime Students of a University as of July 2016

Work-based learning (WBL)

European Union has established many qualification standards and institution for VET (Vocational Education and Training). The European Quality Assurance Reference Framework (EQAVET) and work based learning are good examples of European Union's effort to make VET coordinated well. Those regulations are designed to meet the industrial requirements in the European Union Areas specifically based on defined lessons learned after the economic crises of 2008 (European Union,2016).

Work-based learning (WBL) is another tool and a fundamental aspect of vocational training for the European Union. It is directly linked to the mission of VET (Vocational Education and Training) to help learners acquire knowledge, skills and competences which are essential in working life. The European Union's EQAVET and WBL will help to define outcomes content and design of the distance controlled training.

RESEARCH METHOD

The aim of this study/research is to improve an OJT system which will be controlled by the education institute using distance learning techniques. This research is based on the investigation of the conduct, control and assessment of the on the job training using distance learning techniques in particular training conducted in distance areas from the education institutes. The research is conducted in three phases. The first phase covers a field study on the distance learning techniques which will be used for conducting, controlling and evaluating of the OJT. The second phase is dedicated on the evaluation of existing applications and best practices to be used to improve an efficient OJT system. The last phase is based on an overall assessment of the results of the previous phases to define an efficient and practical distance controlled OJT system.

This study will not only help to create a distance controlled training system but also will provide essential data for planning and conducting a feasible on the job training which combines efforts of the trainees at the site and lecturer at the schools.

RESEARCH

On The Job Training

On the Job Training like other education systems, requires a well-organized planning at the beginning. In order to create a training model both knowledge on the subject delivered and proficiency on education and training planning is required.

The development of the [training] model follows the following steps: (1) identification of potentials and problems, (2) data collection, (3) training design, (4) design validation, (5) design revision, (6) Empirical Trial Phase I, (7) Revision of the result from empirical test phase I, (8) empirical test phase II, (9) Revision of the result from empirical test phase II, (10) recommended model. This experimental method is used for empirical trials (Rahman, 2016).

One of the problem area in the OJT is the coordination between the lecturer at the education centre and trainer at the OJT site. The equipment and procedures/process applied in different OJT sites may differ and sometimes require action (to do list) in the training booklet provided by education centre. This may not match with the

application at the working place. Such problems can be solved easily by the way of coordination between lecturer and trainer at the site using a distance controlled training system.

Distance Learning

The distance learning is used for many purposes. The important issue is to create a model which fit to purpose. Pending upon the type of the education/training to be delivered, the component hardware and software will vary to meet the requirements. Nowadays minimum requirements may be meet with a server capable to store all data sources, audio/video teleconference system, a configurable web site for users and interface with distance users.

An important component of the procedural [distance learning] model is the indicators of the quality of distance training. These are as follows (Makashima , 2016):
– The availability of distance learning [with all aspects];
– The quality of educational services;
– Resource provision of the process of distance learning;
– The effectiveness of distance learning.

The effectiveness is depending upon the data hold in the system, competency of the lecturers/tutors, and quality of the course material and man-machine interface for smooth operations of the system.

The criteria used in the evaluation of electronic resources, required for distance education are (Makashima , 2016):

– Ease of access to resources;
– Affordable cost of network materials;
– Ability to assist users and training of users;
– Stability of network resources;
– The possibility of obtaining long-term access to network resources;
– Facility of license agreements;
– Delays in access to materials due to congestion;
– Determination of the degree of reliability of the seller and the possibilities of further co-operation with them;
– The degree of potential use (based on numbers of users and frequency of access to materials);
– Easy computer interface for users, etc.

Furthermore, the effectiveness of the use of information resources in distance education depends on the use of suitable material, clear definition of the responsibility of the learner, sufficiency of the source of information, proper use of the system by both lecturer/tutors and student.

The organization of training and information professionally-oriented environment requires information on different levels, systematization of the process of presentation of information, interactive communication (Marichev, 2013).

Assessment of On the Job Training

Assessment of OJT differs from the regular education and training system. The main difference is that there are two assessors; the staff in the work place who makes witness for the training conducted and lecturer at the education institute who is the assessor making the final decision.

 On the job training(OJT) has also many differences from the academic studies considering aim, objectives, content, and place, supervision of the students and in particular mode of delivery. Considering all of these differences, the assessment methods applied for on the job training should be different.

Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their *educational* experiences; the process culminates when *assessment* results are used to improve subsequent learning (Huba & Freed, 2000).

The assessment process has a significant importance not only to achieve evaluation of the learners but also to define the problem areas in teaching and assessment. The first issue to be discussed is the quality of assessment. Some main principles should be followed during assessment process. Scottish Qualification Authority defines their assessment principals as "all assessment methods, whether internally or externally assessed must meet our principles of assessment. All SQA assessments must be categorised as: *valid, reliable, practicable, equitable* and

fair (SQA, 2015). This principal will also be used in this study during discussion of assessments made at the end of the OJT.

Mostly, assessments of the on the job training are made using oral examinations and sometimes supported with an assignment which may be used as evidence to prove what is being achieved. The written exams are applied very rarely.

Nursing students spends approximately one year of their academic studies in the medical institutes. Being a long period OJT and mostly lecturers at the working place controlled training, nursing studies are important to make some assumptions on OJT. Rushton and Eggett (2003) made a study an OJT in their field and stated that *Oral examination can be as effective or more effective in evaluating student understanding of medical/surgical content and its application in clinical situations.* Taking into account this result oral examination may be assumed as most suitable for the assessment of OJT.

DISCUSSION
This part of the study covers the following areas;
- Teaching and/or Leading Skills of the Trainees at OJT Site
- Problem Areas Encountered at OJT
- Improvement of the OJT Using Distance Learning Techniques
- A Model Study based on the Requirements

Teaching and/or Leading Skills of the Trainees at OJT Site
Normally supervisors or experienced employers assume to teaching and/or leading role for the students at OJT. Polly-Berte (2016) says; and experienced employees may not have the needed skills for training other employees. Often, supervisors or managers were promoted because they were good at performing or managing their own work, but this doesn't guarantee that they also possess the skills or ability to coach new employees.
Time spared for training at the working place for student is another issue. Supervisors and mentors may not have the time to spare to help new employees. And since on-the-job training usually follows no formal procedure or specified content (other than the task at hand) (Polly-Berte, 2016). Ideally it is required that the trainers need an extra time to deliver their experiment and knowledge to the students, but it is not applicable in the real life due to workload of the trainers.

Problem Areas Encountered at OJT
Based on a study made in the University of Manila the following major issues are found: "Problem Areas Encountered at OJT" based on some field studies and analysis (Talatdat, 2010):

- Lack of congruency between competencies in the industry

- Lack of coordination between school and partner industry

- No work plan clearly presented to the OJT along training requirements, expected behavior and placement

- Lack of supervision on the OJT's work performance

- Lack of identified local shops and industries where OJT' area of competencies in some areas [identified in the OJT Booklet] are needed

- Work assignments of OJT's include menial and unrelated jobs

- Lack of options for OJT's to choose their work assignments in the partner industry

- Financial difficulties among OJT's

- Lack of administrative support

The result of a survey conducted in the Piri Reis University related to the sea training with the participation of 85 students who attended ship for OJT between 4 to 8 months is in the Table 1 and Figure-2. As it has been seen on the table the problem areas are very similar to each other.
The significant points are;

- "Lack of coordination between school and ship" and "No time to complete the assignments at Training Book" are the most important problem areas.

- "Difference between the knowledge at the school and applications on board the ships", Administrative Problems" and "Lack of trainer support" are also found important.
A suitable web site with multi-channel on line communication including Training Books, Teaching Material will

solve coordination problem between adviser at school and student, help student to find relevant teaching documentation, facilitate assignment process, and solve administrative problems by communication between school and OJT site.

Table-1: The result of a survey conducted in the Piri Reis University related to the sea training

PROBLEMS ENCOUNTERED	No	Rare	Often	Very Often
1. Administrative problems (Transportation, Accommodation, Nutrition, communication etc.)	5	24	40	31
2. Lack of trainer support	7	31	34	28
3. Difference between the knowledge at the school and applications on board the ships	8	22	44	26
4. No time to complete the assignments at Training Book	12	18	28	42
5. Lack of supervision of assigned training officers	13	17	34	36
6. Lack of coordination between school and ship	7	14	12	67
7. Lack of communication with adviser at school	20	13	33	34
8. Lack of supporting documents on board to accomplish assignments	8	24	45	23
9. Lack of good relations with of workers on board	18	34	36	22

Figure 2 shows the percentage of the answers from the students based on 4 Level (No-Rare-Often- Very Often).
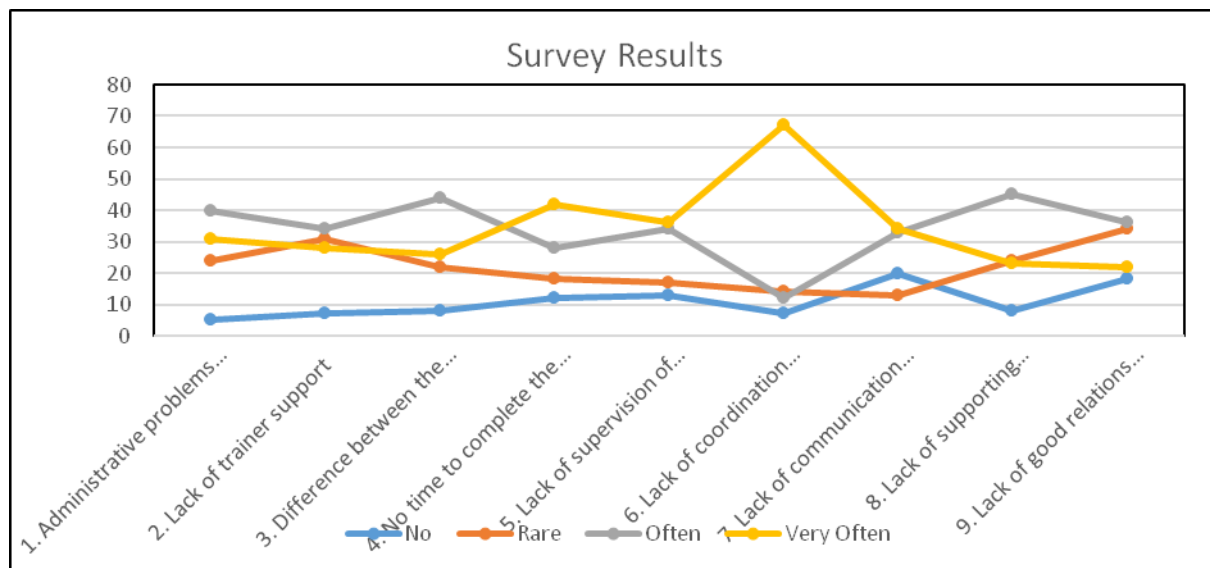

Figure 2: Graphic Display of Survey Result.

Improvement of the OJT Using Distance Learning Techniques
Most of the educations institutes have already distance learning tools and Learning Management System (LMS) as well as their staff has experiment on this system. So, the distance learning techniques can easily be adapted to the OJT. Adoption of the distance learning system in OJT may provide many benefits both for education institute and OJT sites.
Polly-Berte (2016) states that LMS is to be to tracked and it manages one or more parts of the OJT process, including:
- Registering trainees
- Scheduling training
- Storing and delivering reference materials (such as company procedures, concepts, and terms)
- Delivering regular practice drills
- Testing and evaluating job competencies being learned
- Collecting and storing training results
- Delivering and collecting follow-up employee surveys

A classical type of LMS normally responds all requirements above with some small modifications. Nowadays most of the education institutes have their LMS system and experiment on distance learning. This situation facilitates adaptation of existing LMS to be used also for distance controlled OJT.

A Model Study based on the Requirements

The model is planned to meet the requirements of both sites of the OJT; that is Lecturer site at the education institute and Trainee site at working place (Figure 3).

Non-interactive Module

This module contains Pre-loaded video-tapes, Viewgraphs, Course Books, Notes, and Training Booklets-Check Lists. This unit should cover all course materials and directives together with regulations related to the OJT.

Interactive Module

Interactive module will be used for direct communication between lecturer at the school and student at the OJT site which is suitable for audio/visual teleconferences as well. The lecturer will meet the students at structured/programmed times to respond students' questions and delivery for additional information for the students. This module also may be used for direct communication between lecturer at the school and trainer at the working place to solve the problems related to the application of OJT.

Training Booklet and Assignment Module

This module is used to check the Training Booklet that should be filled and Assignments should be done by the student. The lecturer will check the work done by the students and advise the trainee for corrective actions. This module will also facilitate the assessment of overall success of the OJT and academic gradation.

Dynamic FAQ (Frequently Asked Questions) Module

Dynamic FAQ module is used to provide quick response of the students at the OJT based on the *Asynchronous Distance Learning* methods. The solution is to establish a database covering approximately all types of probable/possible questions. It can be achieved creating a Frequently Asked Question data bank based on the questions that have been asked by the learners. It can be named as *Dynamic FAQ* which will be controlled by a *permanent team* to update the FAQ bank and associate the different questions related to each other.

TRAINEE SITE AT WORKING PLACE		LECTURER SITE AT EDUCATION INSTITUTE
NON INTERACTIVE MODULE		**NON INTERACTIVE MODULE**
Use of Pre-loaded video-tapes, Viewgraphs, Course Books, Notes, Training Booklets-Check Lists, Regulations etc.	←	Preparation and update of Pre-loaded video-tapes, Viewgraphs, Course Books, Notes, Training Booklets-Check Lists, Regulations etc.
INTERACTIVE MODULE		**INTERACTIVE MODULE**
Participation to Structured interactive trainee –lecturer Discussion Hours	↔	Planning and conducting Structured interactive trainee- lecture- Discussion Hours for trainee and
Tele Conferences with Trainee Group as required basis	↔	Organize Tele Conferences with Trainee Group as required basis and trainer at
E-mail Conversation with lecturer	↔	E-mail Conversations for both trainee work place /or Trainee Group
TRAINING BOOKLETS &ASSIGNMENT MODULE		**TRAINING BOOKLETS &ASSIGNMENT MODULE**
Filling the Training Book check list		Training Booklet "TO DO" checks
Preparation and introduction of Assignments to Lecturer	↔	Assignment checks/corrections
QURIES DYNAMIC FAQ MODULE	↔	**DYNAMIC FAQ MODULE**
Learner will use Dynamic FAQ module for non-synchronised Questions, Queries, Further details using	→	Dynamic FAQ Module Operator

Figure 3: Proposed Distance Controlled OJT Model

CONCLUSION

Improvement of a distance controlled OJT system will facilitate the application of training and will contribute to the quality of the learning activities. Such a system will also add the following benefits;

- Good communication between lecturer and student at the OJT site as well as a sound establishment of a communication between lecturer and trainer at the working place
- The problems raised during the OJT will be solved quickly using distance learning tools
- The assessment of the OJT could be conducted on a timely manner sharing information recorded in the OJT book by the students
- The effectiveness of training could be increased by controlling, providing corrective measures advised by the lecturer at the school
- In particular administrative deficiencies may easily be solved by coordination and cooperation between education institute and trainers at OJT working places
- The education institute may supervise the OJT activities and if needed can directly involve the general progress of the training at site

A new model to establish an effective Distance Controlled OJT is proposed in the previous discussion section should be trialed. It is strongly believed that with some minor corrections or editions this system could be successfully applied.

- Most of the teaching/learning material is already available and the transfer of this material into digital system may easily be applied.
- Approximately all Learning Management System has digital audio/video communication capability. Education institute should deploy lecturers/tutors to handle this module and assign dedicated hours for lecturer-student interaction.
- One of the hardest parts is to improve a dynamic FAQ module. In order to respond questions from the students who are not able to participate active phases and a frequently updated and comprehensive data base should be improved. Dynamic FAQ (Frequently Asked Questions) which will be operated by a lecturer team is there to collect, analyse and associate the questions coming from the learners and to respond them as well. This requires deployment of a special team responsible to update and improve this system permanently.

Most of the education institutes have already distance learning tools and Learning Management System (LMS) equipped with experienced staff on this system. So, the distance learning techniques can easily be adapted to the OJT. Adaptation of the distance learning system in OJT may provide many benefits both for education institute and OJT sites.

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