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in the Digital Age

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J. Michael Spector,
Dirk Ifenthaler and
Pedro Isaias

**PROCEEDINGS OF THE
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EXPLORATORY LEARNING IN
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EVALUATION OF THE COURSE OF THE FLIGHT SIMULATORS FROM THE PERSPECTIVE OF STUDENTS AND UNIVERSITY TEACHERS

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ABSTRACT

The study evaluates the flight simulators course which was opened to fulfill the intermediate staff need of the sector. To collect data, Qualitative techniques were applied. Within this scope, the case study method was employed in the study. The study group consisted of students and instructors. In-depth and focus group interviews were conducted with the participants by using semi-structured interview forms. To analyze data and obtain findings, content analysis technique was used. Findings explored that, participants were satisfied with the course, the staff need of the sector was fulfilled, the learners gained sector knowledge, and the aim of the teaching process included a practice opportunity in the sector. Additionally, participants expected to the significance of the cooperation between the sector and the university.

KEYWORDS

Flight Simulators Course, Program Evaluation, Sector

1. INTRODUCTION

It is clear that there is a need of cooperation between the sector and the vocational schools of higher education to fulfill the needs desired human source. For a qualified human source of the sector, education and the programs should be of high quality to fulfil the needs of the sector (Akyurt, 2009). Hence, it is necessary to check the existing state of the program from the insiders' point of view. In this study, the course "Flight Simulator I" which was started in accordance with the demands of the sector was evaluated students and instructors point of view. For this purpose, Educational Criticism model which was called the "educational expertise" suggested by Elliot Eisner for qualitative and interpretative data was employed (Alkin, 2003).

By this means, it is believed that an important model will be provided for the courses which will be established later through the evaluations of the views of students, instructors and head of the program. Educational Criticism model which was called the "educational expertise" by Elliot Eisner in the beginning appeared as a result of the objection to the experimental and quasi-experimental studies. Eisner indicated that problems cannot be solved by using quantitative data and the activity of evaluation is a sophisticated and interpretive study (Alkin, 2003). To that end, educational criticism model was utilized in this study, which is frequently used to evaluate "value" and "judgement" dimensions in social studies and also considered as suitable in this design.

2. BODY OF PAPER

2.1 Research Questions

The study reported in this paper aims to investigate the following questions:

- 1- What are the expectations of the participants about the opened course?
- 2- What are the benefits of the course to the participants?

3. METHODOLOGY

Design

To inquire a phenomenon through the views of the persons who took part in the activity, qualitative research method is applied. (Merriam, 2009). Hence, qualitative case study method, sample case study, was employed for the evaluation of the course.

Participants

The participant of the current study consists of the students and instructors of the program. Students consisted of 9 male, 4 female participants, instructors consisted of 3 males. Notices and announcements including verbal and written information about the study referred to define convenient and volunteer participants. At the end, 12 male, 4 female participants accepted to take part in the study in the academic year of 2013-2014. In the study, as the data unit was close to and easily accessible to the researcher convenience sampling technique was employed (Yin, 2011). To collect data, focus group interviews with students and semi-structured in-depth interviews with other participants were conducted to get into the inner world of a person and to understand and grasp the events from his/her perspective Patton (1987).

Data collection

The researcher has been a staff at the department for five years. Hence, it was an opportunity to organize the interviews and collect data. At first, interview questions prepared as a draft by the researcher. After the review of the experts on the field, the final interview questions, the validity of the questions was ensured. Structured interviews with instructors and with the students, semi-structured face to face focus group interviews were employed. Before the interviews, it was stated that the participation was voluntary based and withdrawal was possible any time during the interviews. For the interviews, the places and time convenient for the participants preferred. The interviews were audio recorded with the permission of the participants.

Data Analyses

To analyze data, content analysis technique was employed. The objective of the content analysis is to reduce the words in a research text to a fewer number of content categories (Creswell, 2013). Audio recorded interviews transcribed by the researcher send to each participant to verify. Furthermore, each participant's transcription was analyzed by other experts to compare and verify the results. To provide anonymity, each participant was coded with a pseudonym. For the students, O, for the instructors OE pseudonym was applied during coding. 'In Vivo' coding technique allowing to code each participant's expressions directly was practiced (Chenail, 2012).

4. RESULTS

Themes

1. The Expectations of the Participants from the Course

To define participants' expectations from the course, following results were obtained at figure 1.

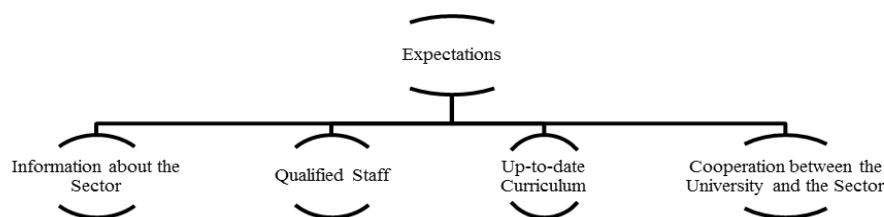


Figure 1. The Expectations about the Opening of this Course

The participants expressed that the program should accomplish the needs of the sector with qualified staff. The program should be up-to-date and also equip students with the basic knowledge of the sector, provide cooperation between the sector and the university.

PB: The companies want to minimize their external dependency by improving their technical staff capacities. Besides, our major objective as the head of the program is to update our teaching curriculum by cooperating with the companies operating in the field of industry. For this reason, a protocol was signed between our program and a leading company operating in flight simulators and giving importance to cooperation with the university. Within the framework of this protocol, thanks to courses which are offered to be opened, our students can graduate as experts in flight simulators as their teaching is still in progress. Thanks to these courses, students will have opportunities to find a job including their internships first by providing education which is parallel with the needs of the industrial sector through realizing the cooperation between the university and industry.

OE-3: We demanded the opening of this course as there has not been an education for training flight simulator technical staff in the aviation sector so far and the background of the staff who applied to our company for a job or internship is insufficient. The main purpose of this course is to provide information about aviation and flight simulators to the staff who will apply to our company for internship and to make their internship period effective.

2. The Benefits of the Course to the Participants

Themes occurred related to benefits of the course to the participants figured out in Figure 2.

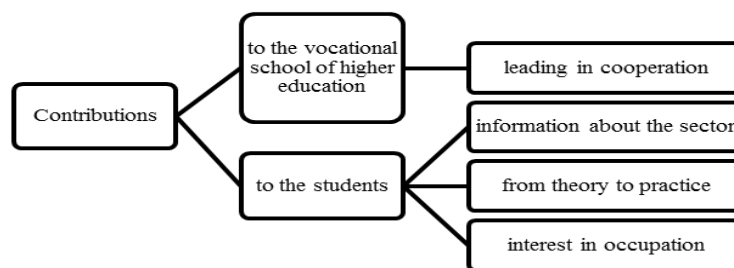


Figure 2. Contribution of the Course to the Students and Vocational Schools of Higher

The participants underlined that the program provided practice opportunity for them. Through the internships, students had the opportunity to know the sector better. Consequently, the motivation of the students to learn increased as well. Some of the transcriptions of the participants are as in the following:

O1-K3: Also it is something that we have known before. In fact, there is a servo-system and a hydro pneumatic system in the plane. We knew this before. And there is a complicated system for everything on the plane. When somebody sees this, he/she becomes more curious and gets more interested in his/her job.

PB: There will be a two-stage benefit from this course. First of all, our students can graduate as experts in Flight Simulators thanks to these courses when they receive their education. In this way, they can use directly their own professional knowledge and skills in the Flight simulators topic. Thus, the current need for qualified technical staff in the fields of aviation and flight simulators will be fulfilled continuously. Another, more important benefit is as following: There is a wide gap between universities which have been providing technical education and industrial companies. Thanks to this course, there will be cooperation between the private sector company and the university. Solutions will be sought to overcome problematic situations, there will be background for other partnerships and we will gain experiences of cooperation with private companies. In conclusion, a model can be created for the cooperation between the university and the industry.

5. DISCUSSION

The issue of cooperation between the university and the sector is among the problems of the sector in Turkey (Çağlayan & Bener, 2006). In addition to that, very few lines of communication and cooperation exist between universities and the sector (Bulgan & Dolmacı, 2015). Whereas the sector tends to collaborate more with universities (Beyhan & Fındık, 2014: 91). It is easier to develop cooperation with the help of qualified instructors (Kyvikand Aksnes, 2015). Keeping university curriculums up-to-date in a parallel manner to the sector and being comfortable about adapting students to the sector after their graduation are among the expected outputs. It is a well-known fact that vocational schools are insufficient (Çağlayan & Bener, 2006)

Because, among known problems, there has been a wide gap between the competencies acquired by the students studying in vocational schools of higher education and the needs of the sector (Gül Koçak, 2006). In the process of filling the gap, the contribution of the qualified staff will be utmost important. The program provided opportunity the theory into practice by practicing learned knowledge during the course (Becit, Kurt & Kabakçı, 2009; Postareff & Lindblom-Ylänne & Nevgi, 2004; Wagler, 2007). In a study carried out by Çağiltay and others (2007) enriching the courses with simulators was highlighted among the expectations of students attending the courses. Besides, having good content knowledge, following current developments and improvements are among the most important expectations of the learners from the instructors (Ekinci & Burgaz, 2007; Aydın, Görmüş & Altıntop, 2014).

6. CONCLUSION

Flight Simulators I-II courses opened for the first time in Turkey at a state school was appreciated by the instructors and the students. The program provided the learners to put the knowledge into the practice. The program included competent instructors and also obtained positive contributions from the sector which supported learners' future carrier.

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