SYSTEM EXPERTISE TRAINING COURSES IN PRIVATE SECTOR:
Can They Be Given Online?

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ABSTRACT

It is widely known that there are many schools in the private sector offering courses in Computer Technology, Computer Engineering, Information Systems and similar disciplines in addition to Universities presenting such courses. The private sector programs are extremely popular with students already studying at university as well as being of great interest to previously graduated university students. The first purpose of this study is to determine the percentage of university students who attend theses education programs. Both previously graduated and presently studying students have been included. Secondly it aims to understand the reasons behind the attendance of such courses by students who are already studying a similar curriculum or have previously studied and graduated in similar and related fields. In the light of this information, some suggestions have been made about giving these courses as online.

Keywords: System expertise, Training, education, curriculum, pivate sector training, online education.

INTRODUCTION

In recent years, computer related education involving system expertise in the fields of Computer Engineering, Software Engineering, Information Systems and other have become widespread at many Universities. In addition, similar lectures and training courses are now also being provided by many organizations in the private sector due to popular demand. Interestingly, when details of the attendees of the private courses were examined it could be seen that most participants were either simultaneously studying the same or similar curriculums at a University, or had previously graduated from a University in the same or a related field.

This study aims to look firstly at the actual percentage of students who are involved with such mentioned education, and secondly to determine the reasons behind this particular education situation. In order to reach a conclusion firstly a survey was conducted among 266 System Engineering students participating in a private sector training course. Then, the curriculums of the private sector training courses and the related fields of the universities were investigated and compared to understand the reasons. In the first section of the paper, the results of the survey have been shown in numbers and tables. In the second section, in order to be able to examine the reasons why engineering students participate in extra training courses in the private sector, the curriculum and the course duration of the mentioned schools have been compared.

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The similar topics are shown in the table and the differences are listed. In conclusion, the results of the survey and the analysis of the curriculum comparison have been blended to present the reasons why students prefer training courses and offer a solution.

METHOD

In this research, the following steps are followed respectively:

➢ Survey questions were prepared by private sector training course administrators. The survey was applied to the participants, answers of some questions under the main headings like personal information, education levels, work conditions, computer ownership and the reasons for choosing the particular training were taken.

➢ A total of 266 students studying in the field of System Expertise training held in a private educational institution got into the questionnaire.

➢ The results of the survey have been shown in numbers and tables.

➢ The educational curricula of the universities providing System Expertise training was researched from the web pages. In total, 4 university curricula were examined. Due to the similarities between them, one of them was chosen and the studies were carried out with this reference.

➢ The curriculum of the private educational institution System Expertise training was taken from the same institution.

➢ The terms given below were used to understand if the students of System Expertise training given by the private education institution had taken a parallel education before;

▪ "*Related*": This term refers to the students who are studying or who have previously graduated from the fields of Information Systems, Computers and Information Systems that are directly relevant to System Expertise training.

▪ "*Semi-related*": This term refers the students studying or having graduated from the sections which are close to the Information Systems and Technologies department.

▪ "*Unrelated* (indifferent)": Refers the students studying or graduated from departments unrelated to the System Expertise area. For example Business, Economics, Biology, Political Science etc.

➢ The following terms are used respectively in order to determine whether respondents are college student or graduate: "Student, "Graduate".

➢ The following terms were used respectively in order to determine whether respondents (graduate or student) have a job at the same time or not: "Working", "Not working".

➢ In order to be able to examine the reasons why engineering students prefer private training courses, the curriculum and the course duration of the mentioned schools have been compared. The same or similar topics are shown in the tables and the differences are listed.

Based on the findings of the survey, an attempt to figure out why people who have already participated in related education in universities need System Expertise training given by private educational institutions.

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FINDINGS OF THE SURVEY

According to the survey results, some findings about System Expertise education can be listed under the following topics:

- ➢ The number of participants, who graduated from "Related" ,"Semi-related" ,"Unrelated" departments, or the number of the participants who are still student at these departments.
- ➢ Two-years degree, graduate and undergraduate level distributions of these participants;
- ➢ The number of participants who have a job and do not have a job, and the proportional provisions of these numbers.

Table: 1 shows the numerical data and percentages concerning the relevant department distributions of the university students.

Table 1:
Related, Semi-related, Unrelated Department Distributions

Department	Graduate		Student		Total	
	Number	%	Number	%	Number	%
Related	45	17%	12	5%	57	21%
Semi-related	72	27%	21	8%	93	35%
Unrelated	80	30%	36	14%	116	44%
Total	197	74%	69	26%	266	100%

On the other hand, Figure: 1 is a visual expression of the students' status that prefer System Expertise training. Accordingly;

- ➢ Only 21% of students in private education institutes are from the relevant departments. The great majority with nearly %79 are from unrelated or semi-related departments.
- ➢ Only 26% of the participants are still students. The greatest majority with 74% have graduated from a "related", "semi-related" or "unrelated" department of a university.
- ➢ It is also noteworthy that the number of the students who have taken System Expertise training is great, despite the fact these students already having had an education close to this training before.
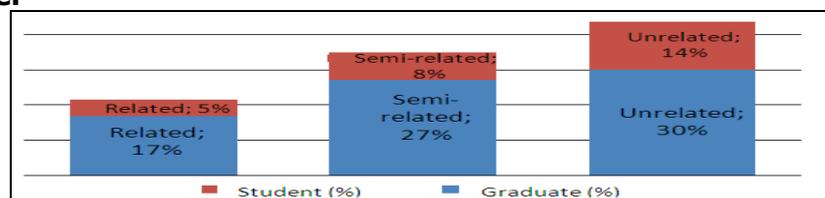

Figure: 1
Percentages of "University- Relevant Section" distributions
of System Expertise Training students.

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When we look at the education level of the students who take System Expertise education in the private educational institution, the distributions of the associate, bachelor's and master students or graduates are shown in Table 2 as numerically and as a percentage according to the relevant sections. As seen on Table: 2;

> ➢ The distribution of associate and undergraduate students of System Expertise training programs in private educational institute is very close to each other.
> ➢ In other words, pre-graduate students have an interest in System Expertise training as much as undergraduate students.

Table: 2
Information Regarding the Distribution of Educational Level and Related Section.

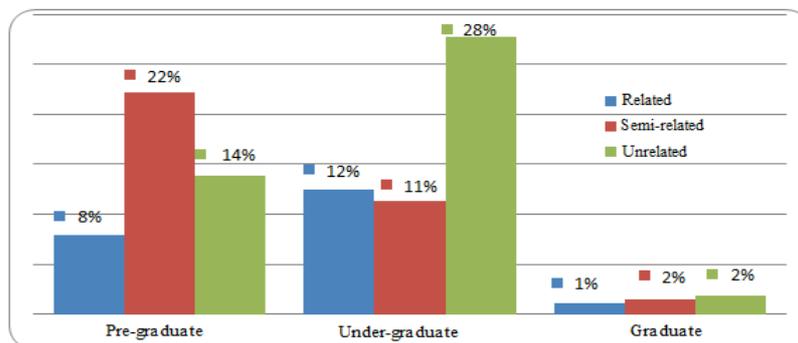| Department	Pre-Graduate		Under-Graduate		Post-Graduate		Total	
	Number	%	Number	%	Number	%	Number	%
Related	21	8%	33	12%	3	1%	57	21%
Semi-related	59	22%	30	11%	4	2%	93	35%
Unrelated	37	14%	74	28%	5	2%	116	44%
Total	117	44%	137	52%	12	5%	266	100%

This situation can be seen in Figure: 2.

Figure: 2
Distribution chart of relevant department- education level.

The information about participants' work status (working or not working) and the related department are given at Table: 3 and the visual comparison of Table: 3 can be seen in Figure: 3. When we look at Table: 3;

> ➢ There is a balance between the students who have a job and who do not.
> ➢ System Expertise training is the choice of participants who want to gain strength for tough market conditions and who do not want to stay at the back of the technological advancements.

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> **Only 12% of the students of System Expertise Programs in Private Education Institutions do not have a job even though they have a degree from the related programs of universities.**

>

Table: 3
Information about Related Department-Work Status.

Department	Working		Not working		Total	
	Number	**%**	**Number**	**%**	**Number**	**%**
Related	24	9%	33	12%	57	21%
Semi-related	43	16%	50	19%	93	35%
Unrelated	61	23%	55	21%	116	44%
Total	128	48%	138	52%	266	100%

The information about the education level, graduation status, department relation status and employment status of the private educational institution's students are given in

Table: 4. Their percentage values are given in Table 5 and the percentages are detailed in Figure: 4.
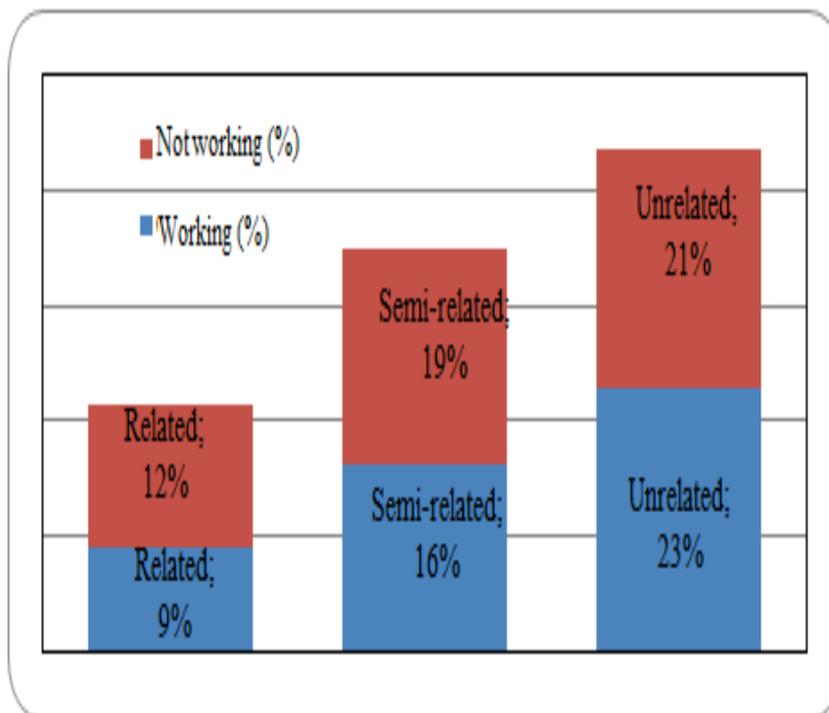

Figure:3
Distribution Chart of Related department - work status

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Table: 4
Numerical information about the distribution of
Education Level-Graduation-Related Department-Work Status

Department	Employment Status	Pre-graduate		Under-graduate		Post-graduate		1. Total	2. Total	3. Total
		Graduate	Student	Graduate	Student	Graduate	Student			
Related	Employed Employed	11	3	9	0	1	0	24	57	
	Unemployed Unemployed	7	0	16	8	1	1	33		
Semi-related	Employed Employed	28	4	9	1	0	1	43	93	266
	Unemloyed Unemployed	21	6	13	7	1	2	50		
Unrelated	Employed Employed	9	3	23	12	1	0	48	116	
	Unemployed Unemployed	22	3	22	17	3	1	68		
1.Total		98	19	92	45	7	5			
2.Total		117		137		12				
3.Total		266								

On Table: 4 and Table: 5, we have these findings related to Systems Expertise;

- ➢ **The people who joined System engineering training and who had a related education at university and were also unemployed make up 12% of all students at the private education institution. As seen, the ratio is very low.**
- ➢ **Nonetheless, the unemployment rate of the students /alumni of semi-related or unrelated sections is 45% (19% + 26%), which is high.**
- ➢ **Based on these figures, another result that can be derived is, people who are unsatisfied with the department that he/she chose at university see System Expertise as a second occupation.**

So, which properties make the difference between private educational institutions and our universities?

Do the students want to get the educational content which is not delivered enough in the university curriculum, from the private educational training courses?

In order to find answers to these questions, the curriculum of the related departments of some universities and the curriculum of System Expertise Training of the private educational institution are compared in the next section.

Table: 5
Percentages about Education level-Graduation-Related
Department-Distribution of Work Status

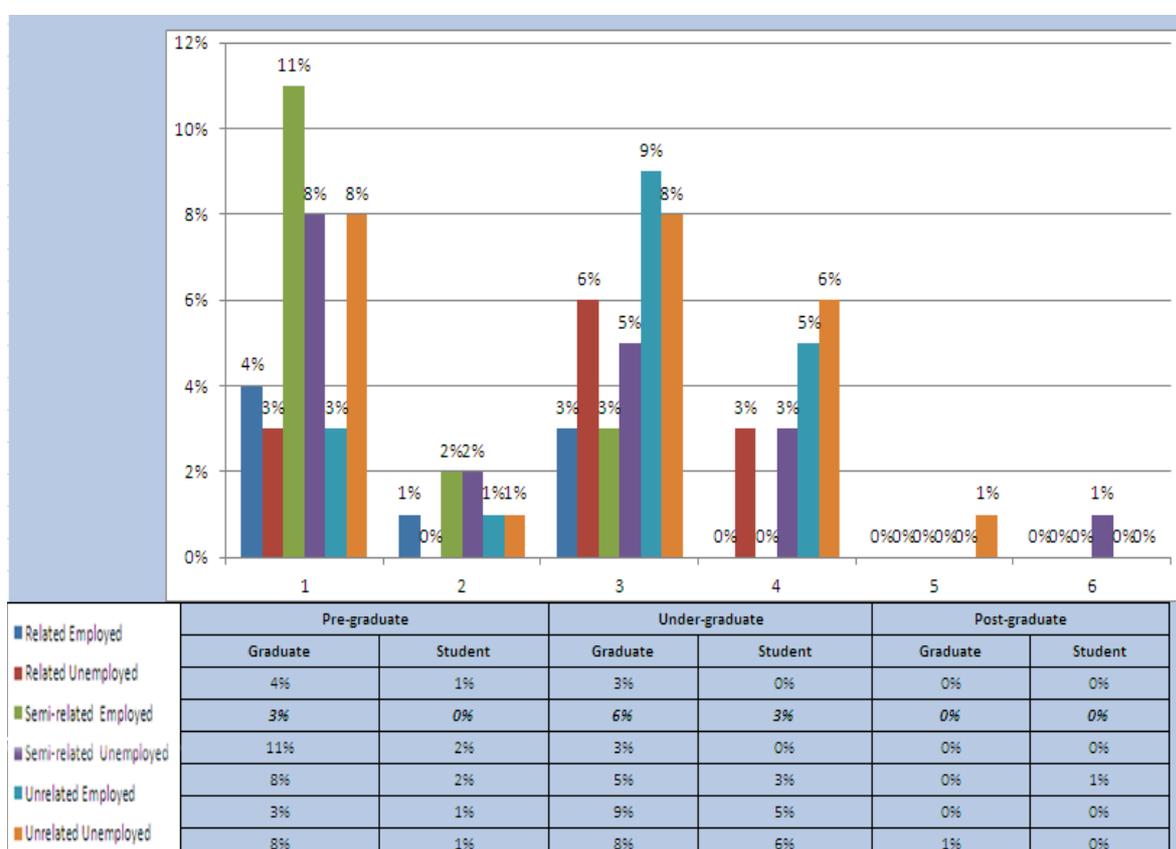| Department	Employement Status	Pre-graduate		Under-graduate		Post-graduate		1. Total	2. Total	3. Total
		Graduate	Student	Graduate	Student	Graduate	Student			
Related	**Employed**	4%	1%	3%	0%	0%	0%	9%	21%	
	Unemployed	3%	0%	6%	3%	0%	0%	12%		
Semi-related	**Employed**	11%	2%	3%	0%	0%	0%	16%	35%	100%
	Unemployed	8%	2%	5%	3%	0%	1%	19%		
Unrelated	**Employed**	3%	1%	9%	5%	0%	0%	18%	44%	
	Unemployed	8%	1%	8%	6%	1%	0%	26%		
1.Total		37%	7%	35%	17%	3%	2%			
2.Total		44%		52%		5%				
3.Total		100%								

Figure: 4
Chart of Percentages
about Education Level-Graduation-Related chapter—Work status.

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UNIVERSITY AND PRIVATE INSTITUDE CURRICULUM COMPARISOINS

In order to make comments on the findings of the relevant parts of the System Expertise classes in universities and courses of a private educational institution, the curriculums are compared. It is tried to put forward the reasons for the students taking the same or the similar training from the private educational institution. At universities, the number of departments providing System Education at the undergraduate level is small. In general, this education is given at graduate level.

In this study, 4 year plans of the Information Technology and Information Systems departments, the departments which have similar curriculums to system expertise training, of four universities are examined.

These universities are Bilkent University (Bilkent University, 2012), Okan University (Okan University, 2013), Trakya University (Trakya University, 2013) and Yeditepe University (Yeditepe University, 2013). Lesson plans of the Information Technology and Information Systems departments of these universities have many similarities. It can be said that, except a few elective courses within the scope of computer networks, there are no big differences.

For this reason, tables about content comparisons between Okan, Trakya, Yeditepe universities and the private education Institution are not necessary to be shown here. In our sample, Bilkent University Information Technology and Information Systems department which gives System Education at undergraduate level is chosen.

All curriculum courses of this department of Bilkent University are compared with the ones held at the private educational institution. Table 6 shows these comparisons and Table 7 shows the curriculum of the System Expertise Training program of the private educational institution.

Additionally to these comparisons, it is seen that some lessons are given at the university but not at the private institution, and vice versa. These lessons are described below:

> ➢ **"Fundamentals of Information Systems" is a compulsory lesson at the university, but it is not included at the private educational institution's curriculum.**
> ➢ **The lessons which are given at the private educational institution but not included at the university curriculum are:**

> - ▪ **Hardware Technologies,**
> - ▪ **Client operating systems and Windows 7,**
> - ▪ **Windows Server 2008 R2 Network Services,**
> - ▪ **Windows Server 2008 R2 Active Directory,**
> - ▪ **Active Directory Design & Security,**
> - ▪ **HP ProLiant Server Systems Management,**
> - ▪ **Vmware Virtualization Technologies and Clustering,**
> - ▪ **Microsoft Virtualization Technologies and Clustering**

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- **Datacenter Management,**
- **Introduction to System Management with System Center Configuration Manager (SCCM), System Center Operations Manager (SCOM) and System Center Data Protection Manager (SCDPM),**
- **Exchange Server 2010,**
- **Corporate Network security with Firewall and UTM devices,**
- **Corporate Network Security and Access Management with Microsoft Forefront Threat Management Gateway 2010 product.**

Tablo: 6

Curriculum Comparisons of Bilkent University Information Technology and Information Systems Department and Private Educational Institution System Expertise Training

Bilkent University Information Technology and Information Systems			Private Educational Inst.		
Course Name	**Hour (T + P)**	**Course Content**	**Course Name**	**Hour**	**Course Content**
Information Technologies	**42+16=56**	The course introduces basic operating system concepts by using Linux operating system. Covered Linux topics include: Linux GUI, kernel, CUI, shells, basic shell programming, Linux file system architecture, file security, linux tools for software developments, etc. The course also introduces networking and internetworking concepts.	**Advanced Linux Training**	**100**	Linux graphical interface, command line, file systems, services.
Linux System Administration	**42+0 =42**	Installation, software management, and user management. Linux shell utilities, file system management, core system daemon, kernel and compilation concepts.			
Web Technologies II	**42+0 =42**	Theoretical and practical-server based programming information to develop web applications. Http protocol, web client/server architecture, php programming language, forms, post and get methods, verifying form information, routing, msql database applications, security problems and solutions with php, xml processing, ajax programming and web service applications.	**Windows Server 2008 R2 Network Services**	**5**	Only Web pages hosting concepts (http, https and ftp) are given.

Database Management Systems and Applications	**56+42 =98**	Fundamentals of SQL with practice in Oracle Database Management System, Views, Constraints, Triggers, Transaction Processing, Entity-Relationship(E-R) Data Model, Relational Data Model, Relational Schema, Functional Dependency and Normalization, Logical Database Design, Relational Algebra,	**Microsoft SQL Server 2008 R2 Maintenance & Administ**	**5**	SQL server installation, database development, taking backups, to return from backups

		Concurrency Control.			
Computer Networks 1	56+0=56	CCNA Exploration-1: Introduction to computer networks. LANs, WANs and Internetworks. Protocols and Layered models. The Open System Interconnection (OSI) model. TCP/IP model. Application Layer Protocols and services: DNS, www, e-mail, FTP, DHCP, P2P, Telnet. OSI Transport Layer: TCP and UDP protocols. OSI Network Layer: IPv4 protocol and addressing: Special addresses, subneting. Routing. Data-Link Layer: Media access control techniques. MAC addressing and framing. Ethernet protocol concepts and types. OSI Physical Layer: Signaling and encoding. Physical media. Planning and cabling networks. Basic network configuration and testing	Network Technologies, IP Subnetting, VPN	10	OSI and IP addressing, subnetworking.
Computer Networks 2	56+0=56	CCNA Exploration-2: Introduction to Routing and Packet forwarding: The router components and configuration using the Cisco IOS. Building the routing table. Path determination and switching functions of a router. Static routing. Introduction and classification of Dynamic Routing Protocols: Metrics and administrative distances. Distance Vector Routing Protocols: RIPv1 and RIPv2. Variable Length Subnet Masking and CIDR. EIGRP operation and configuration. Link-State Routing Protocols: OSPFv2 operation and configuration.	Network Technologies (Cisco)	20	Routing protocols (RIPv1, RIPv2, EIGRP, OSPF)
Data Security in Computing	42+0=42	Theory and practice of computer security, access control mechanisms, distributed security model architectures, cryptographic tools such as shared key encryption (DES, 3DES, AES, etc.); public key encryption, key exchange, and digital signature (Diffie-Hellmann, RSA, DSS, etc.). How these tools are utilized in the internet protocols and applications such as Kerberos, SSL, IPSEC, TLS, and others. Network security issues, such as viruses, intrusion, firewalls, and others.	IT Operation Security Applications and Ethical Hacking	5	IT security

LAN Switching and wireless Network	56+0=56	CCNA Exploration-3: Principles of hierarchical network design. Basic switch concepts and configuration. Design considerations for IEEE 802.3 Ethernet networks. Forwarding frames using a switch. Switch management and security configuration. Introduction to Virtual LANs and VLAN trunking. Configuring	Cisco Switching VLAN Technologies	15	Cisco switches and VLAN management

		VLANs and trunks. VLAN Management and VLAN Trunking Protocol (VTP). VTP operation and configuration. Introduction to Spanning-Tree Protocol (STP). Inter-VLAN routing. Basic Wireless LAN concepts and operation. WLAN Security and configuration.	
Wide Area Networks	**56+0=56**	CCNA Exploration-4: Introduction to Wide Area Networks: Circuit-switching vs. Packet-switching. HDLC, PPP, Frame Relay protocol concepts and configuration. Introduction to Network Security. Using Access Control Lists to secure networks. Standard and extended ACL configuration. Teleworker Services: Broadband services: Cable, DSL and Wireless. Virtual Private Networks (VPNs). IP Addressing Services : DHCP, NAT, IPv6. Network troubleshooting.	**Cisco Routing WAN 10 WLAN Technologies**
Fundamentals of Information Systems	**42+28=70**	Systems, organizational and strategic role and added value of information systems, decision support systems, data mining, MIS, information systems planning, data management, computer networking, internet, analysis, design, development, and maintenance of information systems, competitive edge of information systems.	**Do not match with a course**

T: Theoretical   P: Practice

Table: 7
System Expertise Training Curriculum of Private Educational Institution

System Expertise Training Curriculum of Private Educational Institution	Hour
Section 1- Computer Architecture and User Support	25
1- Hardware Technologies	4
2- Virtualization with Windows Server 2008 R2 Hyper-V	2
3- End-user Operating Systems and Windows 7	19
Section 2- System Management	120
1- Windows Server 2008 R2 Management	5
2- Windows Server 2008 R2 Network Services	60
3- Windows Server 2008 R2 Active Directory	35
4- Active Directory Design and Security	5
5- Microsoft SQL Server 2008 R2 Maintenance and Management	5
6- Project 1	10
Section 3- Virtualization and Server Systems	40
1- HP Proliant Server System Management	6
2- Vmware Virtualization Technologies and Clustering	8
3- Microsoft Virtualization Technologies and Clustering	8
4- Datacenter Management	4
5- Introduction to System Management with SCCM, SCOM and SCDPM	14
Section 4- Networking Technologies	30
1- Networking Technologies, IP Subnetting, VPN	5
2- Cisco Routing WAN Technologies	10
3- Cisco Switching VLAN Technologies	15
Section 5- Corporate Messaging Systems	40
1- Corporate Messaging Infrastructure with Exchange Server 2010 SP1	10
2- Corporate Messaging Management with Exchange Server 2010 SP1	10
3- Corporate Messaging Design and Planning with Exchange Server 2010 SP1	10
4- Unified Communication (UC) and Clustering	10

Section 6- Corporate Security Systems	45
1- Corporate Network Security with Firewall and UTM devices	10
2- Corporate Network Security and Access Management with Microsoft Forefront TMG 2010	15
3- Messaging and Internet Security Systems Design	5
4- IT Operations Security Applications and Ethical Hacking	5
5- Project 2	10
TOTAL	**300**

Another important subject is the completion time differences of the same lessons, at a university and the private education institution. For example;

> As a compulsory lesson, "Web Technologies II" can be completed in 42 hours. The equivalent of this lesson is 5 hours of "Windows Server 2008 R2 Network Services" lesson, which is 60 hours in total and includes many topics.
> "Database Management Systems and Applications" lesson is given in 98 hours. The equivalent lesson at private education institution is "Microsoft Server 2008 R2 Maintenance and Management", which is only 5 hours.
> There are other similar samples on comparison Table 6. Etc.

The reasons of these differences;

> The proximate topics are taken at comparisons; inherently there will be tiny differences.
> At our universities, the topics related with both software and system is given together. For example, web programming topics are also given in Web Technologies II lesson. On the other hand, at the private educational institution, the contents of system and web are separated significantly. In the private institution, people who join software education, learn web programming; people who take web and graphic education, learn how to design a web page; people who take system education, learn only the services to publish a prepared web page. Universities give all of these in one class of 60 hours in total. Nonetheless, a student who takes these three courses from the private education institution will have more lesson hours to learn the contents of the web. Briefly, private educational institution brings a whole branching solution.
> Again if we give Web Technologies II lesson as an example, all lesson is about theory. At universities, many of the lessons do not have practical hours. The total hour of a lesson includes both theoretical information and practice. But in private education institution, the most of the related topics are given in training with more lesson hours and predominantly as practice.

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- As in 42 hours of "Data Security in Computing" lesson, the algorithms of the topics like DES, 3DES, AES are given. However, in private educational institution these algorithms are never discussed. On the contrary, the services which use those algorithms are given. Students have a chance to learn the market equivalent of the theoretical topics taken from the university curriculum.
- Maybe the most important finding is, *universities give software education under system education class*. The private education institution differs here. Most part of the system education content includes the topics that are not given at the universities' system education departments but demanded in private sector.

When we look at the last part of Table 6, it is clear that the lessons not given at the universities in all related departments but are included in the private educational institution's System Training equals 230 hours in total. If we remember that the whole education is 300 hours, we can see the difference. After curriculum comparisons, it will be approriate to examine the "success evaluation criteria" of the private institution and to compare the success of the given education. Private education institutes set 4 exams during the training period to evaluate student success. According to the results of these exams, students take attendance, success and superior success certificates. These are graded as 0-49, 50-79 and 80-100 respectively. In 2012;

- the Private education institute gave certificates to 266 superior successful students (%44) and 114 to successful students (%19) among 606 System Education Training students.
- This means that 63% of the students who started the training were successful at completing and the others took only the attendance certificates.

RESULTS

According to the survey results and the analyzed curricula about the System Expertise training;

- At Computer Technology and Information Systems Department of Bilkent University, 490 hours of theoretical and 84 hours of practical training about System expertise area are given. That is to say, students have to take a minimum of 490 hours theoretical and 84 hours practical lessons until they graduate. Okan University Information Systems and Technology department of School of Applied Sciences and the other universities related departments have nearly the same numbers. However at a private institution, students who take the standard education program have 350 hours training and this number is nearly half of the hours given at the universities. However, students prefer to take training program from the private education institute.
- Only 21% of the System Expertise Education students are from related departments. In other words, a vast majority of them are graduated from unrelated or semi-related departments.

- Undergraduate students are interested in the System Expertise Training as much as graduate students or graduates.
- In general, system expertise training is becoming the choice of a person who has a job and wants to improve him/herself for market conditions.
- Only 12% of System Expertise students at private educational institutions do not have a job, even though they have graduated from a related department.
- It is seen that 79% of the System Expertise Training students are from semi-related or unrelated departments. These students want to take this education even though they have taken the same or similar education before.
- A further result shows System Expertise training is the training which is chosen by the people who are not satisfied with the department that he choose at university.
- If we look at the contents of training, we see that some of the courses held at university are not held at a private educational institution, or vice versa as mentioned before.
- In addition, some of the courses held during a semester at university are limited to very few teaching hours on the private educational institution's curriculum Attention is drawn to some points as the reasons for this difference:

  - In the Private educational institution, system and web content are significantly separated. However, the topics related to system and topics related to software are studied together in the program. So it can be said that there is lot more branching at the private educational institution.
  - In some classes at the university, the issues/systems or algorithms that are no longer used in the sector are explained. On the other hand, private educational institution content includes the topics/content/algorithms that have been updated and in demand by the sector.
  - Also systems using the algorithms are explained rather than the logic of algorithms.
  - Universities devote considerable time to software education under system training
  - On the other hand, Information Technology and Information Systems curricula do not contain widespread technologies used by the market. For example, virtualization technologies (VMware vSphere, Microsoft Hyper-V), Exchange Server, SCCM, SCOM, Active Directory, Cluster technologies, hardware and software firewalls that are preferred by almost all medium and large sized companies are not discussed. Students are graduating unready to meet the market requirements.

- Although there are some prerequisites for some courses at the relevant departments of the universities, some do not apply this rule. However, in the private educational institution, courses are chain-connected and students receive training in the sequence specified.

- Educational approach of the private educational institution focuses on the training that can help to educate individuals to meet the needs of the market. However, universities aim to educate academics and individuals who want to learn and work in this field.
- When examined, it is seen that there is no college education that fully meets the system expertise education given by the private educational institute. Curricula of current system education departments are enriched with software lessons.
- Also, in recent years, the total number of credits taken for college graduation has been reduced. For this reason, there is a reduction in the number of the hardware or system lessons.

At this point, the suggestions for Information Technology and Information Systems programs are briefly as following:

- In these sections, the courses that are parallel to the demands of the market should be opened ,
- The curriculum should be updated frequently in line with the demands of the market,
- Some precautions could be taken to eliminate the disadvantage of the crowded classrooms.
- The number of lessons focusing on the content of the system should be increased at the Computer Engineering or related departments.
- The courses should be changed to include system topics. For example;

  - Server operating systems and all the services they offer could be discussed.
  - End-user operating systems could be described in depth.
  - Mail servers could be described in depth.
  - There should be practices on routing devices during lessons.
  - Virtualization technologies should be described.
  - Network projects overlapping the market realities could be done.
  - As a first step, private educational institutions' System Expertise training lessons like "Mobile Programming, Objective C", "Windows Services, XML, Web Services," and "LINQ, Entity Framework" lessons should be added to the curriculums of the related departments of the universities.

As a recommendation to private education institutions, it can be said that, there is a need to prepare e-learning version of the system expertise training. It is clear from the explanations and the finding mentioned above, the private education institutions that give system expertise training are meeting a considerable demand. That demand comes from people both working, unemployed or still student. Even with a little research on internet, it can be seen that the most publicly known private institutes which give these lessons in successful and effective ways, give this training in traditional education environment namely face-to-face. As we remember from the findings mentioned above, %74 of 266 participants is diploma holders while %26 are still a pre-graduate or under-graduate students. Moreover, %48 of 266 participants of System Expertise training program have a job.

Also, people who are unsatisfied with the department that they choose at university see system expertise as a second occupation. From this point of view, it can be said that, if this training is given in e-learning environment, there will be an increase in the number of the participants who are employed or student and want to participate this training.

E-learning platform will provide timing flexibility by giving attendees the ability to set their own course periods, will help eliminating distances, provide accessibility to content whenever or wherever, chance to repeat anytime, ability to enrich content with images, animations and voice etc., have support for virtual classes, and will help attendees to practice by using interactive applications. As a natural result, all of these will help to save money for both institution side and attendee side. If we look from a different perspective, the system expertise education is have to be a field that meets demands of sector, have agility to add most recent education content and share those information rapidly. In e-learning platform, it is possible to apply content updates and forwarding to attendees with less effort in short times. By gathering these factors together, it will increase the attendance and success of the system expertise education in private education institutes to move to the e-learning platform.

As a conclusion, it is obvious that our students who study/graduated from system expertise or related departments, also attend courses held in private educational institutions to support their college education to gain better jobs. To reach a balance, it is thought that considering these suggestions will create a significant effect.

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The data of the survey applied to 266 students in the private educational institute.