



**DO IT AND MEDICINE STUDENTS
E-LEARN IN THE SAME WAY:
ANALYSIS CONSIDERING
COLLABORATIVE MODULES**

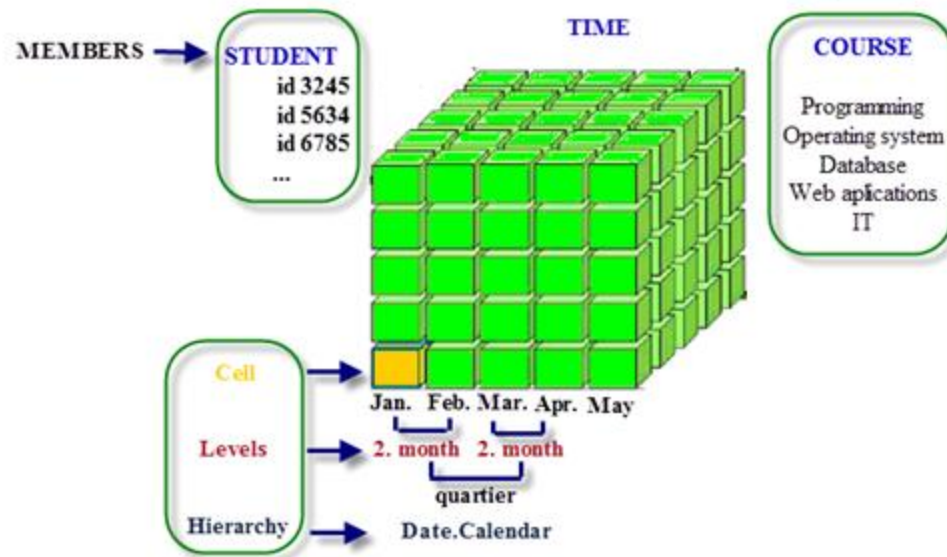
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Introduction

- Web expansion and e-learning technologies
- LMS as the most frequently used software in higher education
- Evaluation and log analysis

Olap (OnLine Analytical Processing)

- Olap in decision support
- Olap cube



Purpose of the study

Goals

- Determination of the difference existence in the behavior patterns between students of medicine and students of informational technology
- Professors will have an insight in students' patterns of behavior and they will help them to organize their classes so that students can be more active and learn better.

Purpose of the study

Objectives

- Data pre-processing: clean and prepare the Web server log file
- OLAP analysis: design a multidimensional structure in which the main factors under analysis:(year, month, day, time, minute, course, and module activity) will be taken as dimensions and later build OLAP cube in order to analyze the recorded data

Purpose of the study

- Pattern evaluation: determination of behaviour patterns based on obtained reports and their evaluation
- Comparison of behaviour patterns between medical and informational technology students.

Purpose of the study

Hypothesis:

- 1 H0: There is no significant statistical difference between IT students and medicine students in access to collaborative modules (chat, forum).
H1: There is a significant statistical difference between IT students and medicine students in access to collaboration modules (chat, forum)
- 2 H0: There is no significant statistical difference between IT students and medicine students in access to collaborative modules (chat, forum) during the day
H1: There is a significant statistical difference between IT students and medicine students in access to collaborative modules (chat, forum) during the day

Methodology

- Pre-processing
- Creating dimensions and Olap cube
- Browsing the cube
- Applying Anova, Manova

Methodology

Participants

- Technical faculty Cacak
- Medical faculty Belgrade

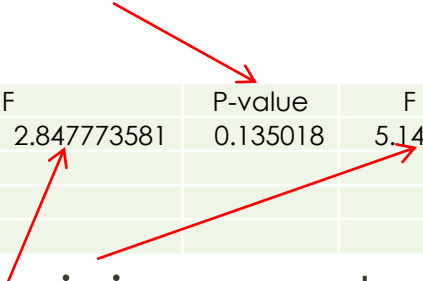
Tools

- Microsoft Visual Studio 2008,
- Microsoft SQL Server 2008 and
- Microsoft Excel

Results

Table 1: Analysis of variance (ANOVA) for IT and medicine students


Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	341231688	2	170615844	2.847773581	0.135018	5.14325285
Within Groups	359472070	6	59912011.67			
Total	700703758	8				



Having $F < F_{crit}$, the null hypothesis is accepted. Hence, there is ***no significant statistical difference*** between IT students and medicine students in access to collaborative modules. The p-value also indicates that the null hypothesis should be accepted, because $p > 0.05$.

Results

Table 2: MANOVA for IT and medicine students



Source of Variation	SS	df	MS	F	P-value	F crit
Rows	4894910	94	52073.51	1.011776	0.466001	1.331981
Columns	6675101	2	3337551	64.84783	3.82E-22	3.04398
Error	9675875	188	51467.42			
Total	21245887	284				

Since it is $F < F_{crit}$, the null hypothesis is accepted. Hence, there is **no significant statistical difference** between IT students and medicine students in access to collaborative modules during day. The p-value also indicates that the null hypothesis should be accepted, because $p > 0.05$

Conclusion

- Appropriate research technique?
- Differences between students of IT and medicine in learning domain, inside collaborative modules?
- Advantages and drawbacks?
- Future work

Acknowledgments

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Questions?





THANK YOU!

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