Zoran **Putnik**, Zoran **Budimac**

Structure of a Local (SE) Course/Lecturers Survey at DMI in Novi Sad

Department of Mathematics and Informatics,
Faculty of Science, University of Novi Sad, **Serbia**

Content of the presentation

Two Surveys For "Software Engineering" Course

- A survey used at Humboldt University in Berlin for assessment of "Software Engineering" course and lecturer, was for several years used at DMI in Novi Sad also.
- Our results were already presented at these meetings …
- … and are quite satisfactory ☺

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Evaluation for previous years

	2010/11	2009/10	2008/09	2007/08	2006/07	2005/06	Love to have
Attendance	75%	67%	54%	73%	70%	75%	
Time for studying	2.57h	1.19h	1.48h	1.5h	1.79h	1.2h	
Time for assignments	4.32h	3.35h	3.5h	2.7h	2.99h	2.63h	
Appr.quantity of knowledge	3.20	3.74	2.96	3.12	2.97	3.21	3
Appr.lecture content	2.95	2.78	2.75	3.00	3.00	3.04	3
Course well structured	3.35	3.33	3.50	3.83	3.31	3.46	5
Lecturer							
- knows the material	4.10	4.30	3.75	4.79	4.10	4.50	5
- well prepared	4.00	4.04	3.89	4.65	3.69	4.25	5
- engaged	4.10	3.96	3.85	4.59	3.76	4.04	5
- willing to answer questions	3.88	4.63	4.68	4.91	4.64	4.46	5
- appr.presentation speed	3.38	3.22	3.29	2.33	3.41	3.25	3
- inspiring style	2.90	3.00	3.39		3.21	2.92	5
Adequate quantity of info	3.15	2.85	3.29	3.70	3.28	3.38	5
Well organized slides	3.45	3.07	3.43	3.70	3.56	3.38	5
Tough assignments	3.21	3.41	3.25	2.70	3.30	3.21	3
Motivating assignments	3.40	3.52	3.21	3.20	3.22	2.71	5
Learned enough new?	3.60	4.04	3.85	4.04	3.82	4.08	5
Learning smtg useful?	3.65	3.59	3.78	4.56	3.90	4.08	5
Grade for the course	3.85	3.70	3.82	3.95	3.82	4.00	?

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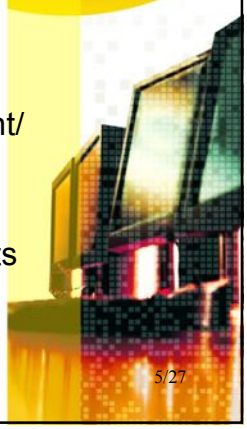
Why new survey?

- At the DMI (and all over the Serbian university environment) each 5 years, accreditation takes place.
- Accreditation assumes assessment of each Faculty, each Department, each study direction, even including buildings/equipment/ people employed/classrooms …
- "People employed" are assessed by students – for each course, both professor and assistant are evaluated anonymously by students attending the course.



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Why new survey?

- This data is used on a level of accreditation to assess if a Department is *able* to conduct certain study directions.
- Yet, it is also used on individual level to assess if a person is ready to advance to the next level of a lecturer.
- For each advancement in a rank, all of the grades, for all of the courses, for previous 3 years are collected and joined with the other gathered data about a lecturer.

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Content of the presentation

1. Introduction to surveys
2. General Type Data
3. Students Opinion About the Course
4. …… Lecturers
5. Usage of Collected Data
6. Problems and Possible Solutions

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The First Part of a Survey

- This part contains mostly general type data:
  - data about the course attendance,
  - average student grade during studies so far,
  - grade that student expects for a course in question.
- … or collected, statistical data for the course:
  - grade for a course (+standard deviation),
  - grade for a lecturer (+standard deviation),
  - average grade students expect for themselves,
  - structure of students considering their average grade so far,
  - year of study, type of studying, year of studies enrollment, how many attempts for this course …

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The First Part of a Survey

- This part of a survey easily shows the first type of contradictions/problems:
  - number of students is not high since survey is conducted on the last week of studies, when:
    - student already dropped-out in a large number, or
    - when classes are already finished, or
    - when students are preparing for the exam period.
  - yet, those present are exactly the students we need
    - interested,
    - those who attended the classes and
    - *do* have a valuable opinion about the course and lecturers.

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The First Part of a Survey

- Another type of problem was already presented at these meetings, and concerns non-realistic expectations of students.
- Average grade during studies:
  9-10 – 8%
  8-9 – 32%
  7-8 – 60%
  6-7 – 0%
- Grade student expects for SE:
  10 – 17%
  9 – 63%
  8 – 20%

Average 8.97

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The Second Part of a Survey

- This part contains typical, expected questions:
  - is the pre-knowledge of a student sufficient?
  - is the material well structured and presented?
  - are the materials interesting? Contemporary? Applicable?
  - is the literature available? Adequate?
  - overall grade for the course?

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The Second Part of a Survey

- Students are able to grade each category at 4 levels:
  - agreed completely
  - agreed partially
  - do not agree
  - can't estimate
- Since "can't estimate" is reserved for those who didn't attend, the scale can perhaps be more sophisticated?
- (Or not? Our students have opinion about *everything!*)
- Our grades for past years: 9.25 (8) / 8.5 (15) / 9.5 (12) / 8.53 (15) / 8.58 (24)

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The Third Part of a Survey

- Besides questions about attendance and consultation hours (sometimes revealing silly results), regular questions are:
  - lectures are well prepared?
  - lecturer initiates active participation of students?
  - lecturer presents material clearly and understandably? Interestingly?
  - quantity of a material is ok? Speed of presentation?
  - lecturer is willing to answer questions? Has a correct relationship with students? Is fair with grading?
  - lecturer uses what equipment? How much? Is it adequate?

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The Third Part of a Survey

- Questions about professor and assistant are separated, yet the only additional question with the assistant is:
  - “Are the lectures and exercises properly combined?”
- Our grades over the years were:
  - 9.67 and 9.22 (9)
  - 9.15 and 8.96 (26)
  - 9.27 and 9 (15)
  - 9.25 and 9.17 (12)
  - 9.06 and 9 (16)

(grades *are not* given in any order!!)

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What Happens With the Data?

- Each time a person applies for a higher rank, from the database of grades, a certificate is issued as a "*Proof of a successful teaching*"
- It contains:
  - name and rank of a person
  - school years in question (the last three)
  - courses assessed (4 in my case, 5 for Budimac)
  - number of students surveyed
  - grade
  - and official memo of the Faculty, Dean signature, and stamp, while the certificate is officially filed in a persons dossier.

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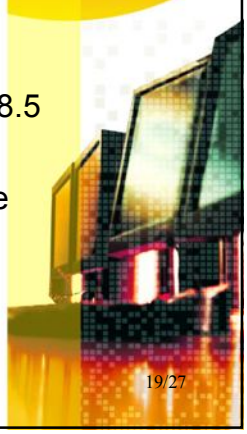
What Happens With the Data?

- Now – let us suppose that someone has a bad grade?
- What is bad, after all?
- Average grade at our Department is around 8.5
- Only 2 exceptions in recent years, with grade lower than 7.
- What then?



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What Happens With the Data?

- *IF* Dean sees that the same person has repeatedly bad grades, Dean will invite that person for a friendly chat. With coffee. And inform her/him about the fact.
- In theory, it is possible that bad grades given by students can make a difference with the persons' advancement, but it never happened.
- There is a lot of reasons, we'll enumerate some of them.

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WWW (What's Wrong With) grading

- Let us just compare Budimac and myself and see possible problems:
  - One of us was assessed by 185 students, the other by 88.
  - One of us has an obligatory subject at first year of studies, the other has the elective one.
  - So – one is assessed by 80 students who:
    - can't compare because they haven't seen enough other lecturers;
    - are forced to listen to something they might not like;
    - are (perhaps even) forced to study something they don't like, but their parents think it's good for them.

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WWW (What's Wrong With) grading

- While the other one is assessed by 3 students who:
  - can't compare because they haven't seen enough other lecturers;
  - (which meant that one of them even didn't know the name of the lecturer!!!)
  - choose what they want to attend to.
- Fair? Weeeeellllll …. after several years, working on several courses, with several smaller and bigger groups of students … it should even-up!
- That's why Dean waits for several years, before inviting someone for a coffee ☺

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General problems

- So – on a general level, we can notice several problems:
  - number of students differs largely on the first year of studies, and on the final year
  - knowledge and experience of students with various lecturers especially;
  - there is a significant difference between "obligatory" and "elective" courses – both in number of students and in their satisfaction with the course;
- As an idea - at neighboring "Technical Faculty", grades are multiplied by coefficient which depends on number of students.

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Ideas for Improvement

- Wishing to improve grading further, our Department is considering deeper refinement:
  - Average of a lecturer = P
  - Average of a Department = Q
  - Number of students who assessed = N
  - Limit (Mediana? Not exactly average, but a point that separates lecturers in half by number. Or something more clever?) = m
  - "Clever" grade for a lecturer = G
  - Then: $$G = \frac{N}{N+m} \bullet P + \frac{m}{N+m} \bullet Q$$

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Ideas for Improvement

- Formula is taken from "Internet Movie DataBase" and should in practice act as follows:
  - if a person is assessed by a *small* number of students, than we *do not* have enough data about her/him, and we move its' grade towards the average of the Department;
  - if a person is assessed by a *large* number of students, than we *do* have enough data about her/him, and we move its' grade towards hers/his average;
- Unfortunately, this does not take into account other problems, so the work about the formula is not over yet!

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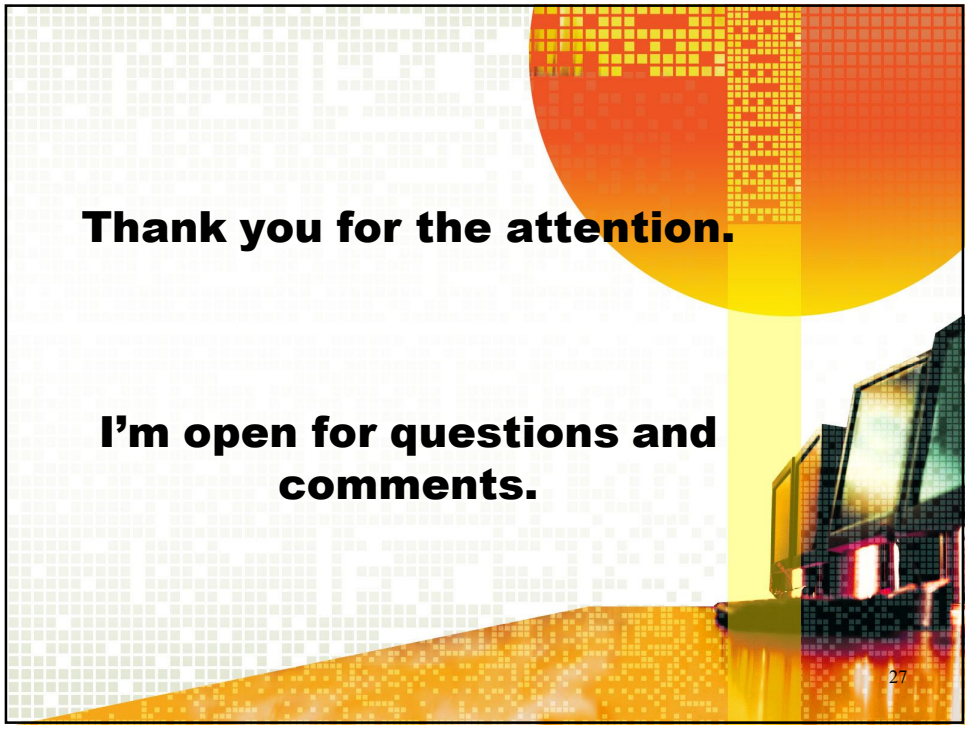
Thank you for the attention.
I’m open for questions and comments.
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