Course Feedback System

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ABSTRACT

NC State University, with its 18 major Undergrad programs, 160 Graduate programs and 60 doctoral programs, offers a wide range of choices in terms of course curriculum. Graduate program of Computer science department alone offers a pool of 77 different courses from which students can select the courses best suited for their requirements. NC State uses a common student portal called MyPack for the course registration and provides course catalogue from which student can search for any particular course and description. This report focuses on the issues faced by students while selecting a particular course using the already existing system and justifies the need of better course feedback/review system. The report also gives an overview of the short-comings of the existing system and how they can be eliminated using the proposed system. Finally it provides some glimpse into how new system design will look like and how we can extend this application for more departments, programs or even universities.

Keywords: Course, Evaluation, Feedback

1. INTRODUCTION

Courses are the most important part of any studies and best-selling point of any university. The kind of courses selected by students impact their future field of studies, Majors, Certifications and their inclinations. NC State uses the online catalogue system to give students an idea about the course content and offerings. However, at the time of course selection, the course taken by a student is only influenced by the short course description provided for the course and some reviews that he/she might have collected from other friends and seniors. This traditional way of course selection based on the short course description is somewhat unsatisfactory in the long term as the course content and subject description are not the only things factoring into the importance of course. And even if it is, the traditional system only gives a peek into what the actual course holds. There are so many other factors that contribute to the successful course completion and therefore need to be considered before a particular course is selected.

To eliminate this issue, we conducted a user survey to determine what all factors are generally considered important for students to select a course. The idea is to create a near perfect solution to deal with this problem of course selection and give students a common platform where they can not only get the information needed for the course but also can post the feedback or reviews about the course they have already taken and can be of assistance to someone whose going through the same dilemma. This paper discusses our thought process behind the user study and the conclusion that we reached to, based on the outcome. We also have tried to give an overview of the design and some of the ideas for successful implementation.

2. EXISTING SYSTEMS

2.1 ClassEval

NC State already has a system called 'ClassEval' which is the end-of-semester survey for students to evaluate instruction of all university classes. The current survey is administered online and includes 12 closed-ended questions and 3 open-ended questions. Deans, department heads, and instructors may add a limited number of their own questions to these 15 common-core questions. Students receive an email message directing them to a

website where they can log in using their Unity ID (NC State credential unique for each student) and complete evaluations. A high response rate and candid, thoughtful answers are essential for giving each instructor and every department useful feedback for improving the class in the future. After the ClassEval website is closed, a report is created for all the instructors that includes the average rating from the class. A separate report includes students' responses to the open-ended questions.

Even though the system is well thought and implemented, its main agenda is constant improvement of the teaching standard at NC State and therefore the reports generated by the ClassEval are only accessible to the instructors and Department itself. All responses are confidential, and instructors cannot see which students evaluated them. Same way, students are not provided with the access of these feedback and therefore there is no way for student to know how the teaching instructor is graded on the report. That being said, only way for students to garner information about the teaching faculty is to look for someone who has taken the same course under the same section last time when it was offered. And with that many filter criteria applied, search for these students often results empty. So even though the system is already in place, it does not help with the hassle free course selection.
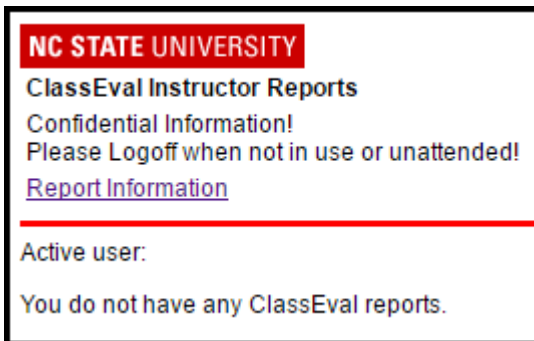

fig.1 Drawbacks of ClassEval

2.2 Third party websites

During our research for such similar projects, we found a third party website that to some extent satisfied our requirements(https://www.ratemyprofessors.com/). This website asks users to grade their professors by giving answers to predefined set of general questions. Moreover, the important feature is that students can leave an honest review/ comment about the professor which, in a way, can be used to provide the feedback of courses. However, the number of comments we came across are very limited and in some cases, we couldn't even find a single review about the professor. One of the possible reasons for we came across is that many students refer to this website while they are choosing any particular course but forget contribute to it when they successfully finish the course. And since it's not related to any particular university, any kind of reminder system is not integrated in the website. Another issue with this website is that it is extensively used to rate the professor and not to evaluate the class. Therefore, there are only two questions in the questionnaire that roughly relate to the class evaluation and are not sufficient enough for students to gauge the course.

Therefore, we feel the need to design a better feedback system only for NC State University students with ease of access attractive features for students. Furthermore, we could ask for support from the school and various departments to advertise the application. Since everyone could give feedback on the courses they take, eventually we would get a huge database of reviews of all the courses which helps students make a wise decision on choosing courses.
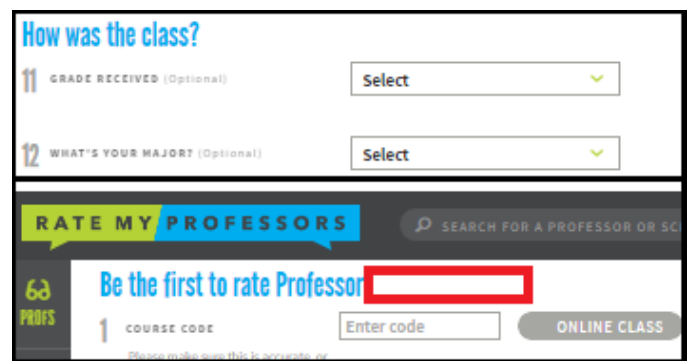

fig.2 Drawbacks of ratemyprofessor.com

2.3 Enroll and Drop

In NC State, students are given the provision that they can enroll for any course (without instructors' permission) within one week of the beginning of semester. They can, however, enroll in maximum of five courses at the same time and hence have to decide beforehand about those five courses. Another issue with this system is that one week is not sufficient for students to judge whether they can relate to the course in general. Initial weeks are quite introductory and students don't get the in-depth knowledge about the subject. Some of them take the course without confidence and gradually loose interest which makes it difficult to succeed. Even if students cope up with the early course enrollment, the drop dates are generally set after 2 months of the enrollment. So during that period, students who were wait listed are quite uncertain whether they will get the course or not. Same way, students who decide to drop the course at the end

of 2 months cause some seats being available and yet unfilled.

As explained above, all current course feedback systems have their own drawbacks and are not suitable for reliable course reviews. We really require a well-formed feedback system to avoid these kinds of issues with the course selection at NC State University.

3. USER STUDY

The most important requirement of this user study was to target the vast and diverse student base as fast as possible. So we documented a short survey of 8 very important relevant questions that we thought would help us better design the application and justify its purpose. The survey was shared within various student groups online and the users were assured of complete discretion and asked to be as honest as possible. Below are the research questions that we posed, reasons behind asking such questions, responses that we got and finally the conclusion that we reached to after this analysis.

Q1) How do you gather information before choosing a particular course?
Students generally consider various factors in mind before they choose any particular course, so we decided to start our survey with the basic question in order to know those factors and their priorities according to students.

Result: Based on the results we got from the students, we can say that 2/3 of the students rely on the feedback of friends/seniors rather than course description provided by the website while choosing a particular course. This clearly indicates the need of common feedback sharing platform for students.
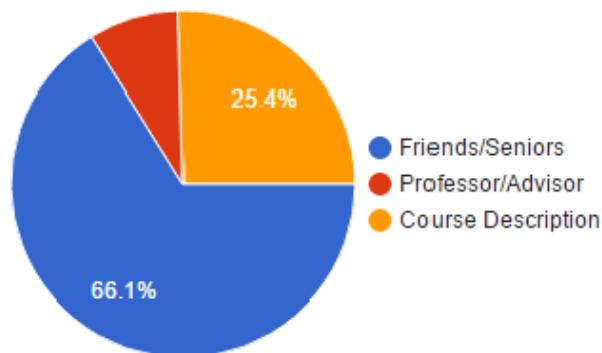
fig.3 feedback collection methods

Q2) How many reviews/feedback do you generally get before taking up any particular course?
This question was posed to know how many reviews students generally consider enough for the decision of

taking up the course and whether that number has any correlation with their decisions to drop the course.
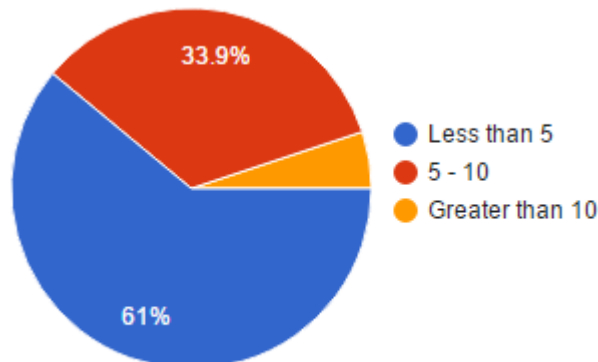
fig.4 Number of feedback

Result: The figure above shows that approximately 60% of students generally get less than 5 feedback before choosing a particular course. And based on this small number, it is safe to assume that the feedback that they get from friends are not detailed either. Hardly 5% of students try to get more than 10 feedback before taking the course. This result shows the need of common review database for students so that they can get more diversified and quality feedback in future.

Q3) How often do you drop a course after successful enrollment, because you are not satisfied with the course content /professor?
We also noticed that students often drop one or more courses even though they are interested in the subject matter just because the course content was not in correlation with the course description given on the website. This question was asked to gather information about the number of such unsatisfactory experiences.
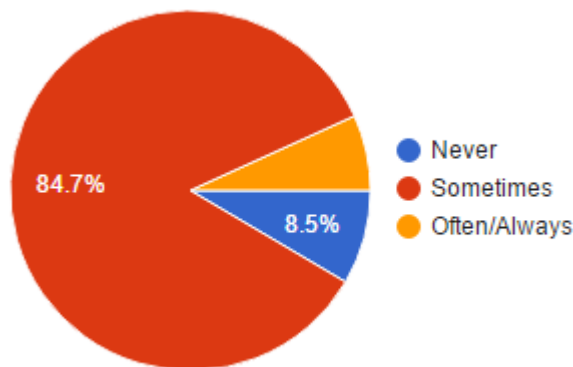
fig.5 Course drop-rate

Result: As indicated in the graph above, we can see that only 8.5% students are confident enough in their course selection and have not feel the need to drop a course after taking it. More than 90% students drop at least one course because they are not satisfied with the course content or the professor. If we have better feedback/review system in place, we can remove this inconvenience.

Q4) Generally, what are the reasons to drop a particular course?
We put forward this question because It was important for us to know the most common factors for such a high drop rate at NC State , so that we can try to collect more feedback/reviews focused on those factors for any particular course.
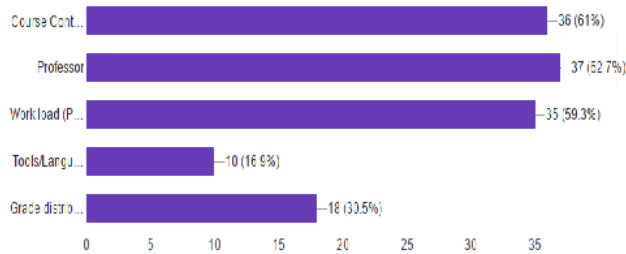

fig.6 Reasons for course drop

Result: Approximately 60% weightage was given to 3 factors, Professor, course content and work load. NC State currently does not have any system that helps students with the feedback of professor and work load.But even though course description is given, students are not able to correlate with the course content and that factors into 61% of course drops.

Q5) What are the most important factors that you consider while choosing a particular course? Rank them as per your priorities (1 - for the most important factor, 5 - for the least important factor)
It is assumed that the most important thing a student may consider while taking a course is the course content description given on MyPack. This question was posed to quantify this assumption.
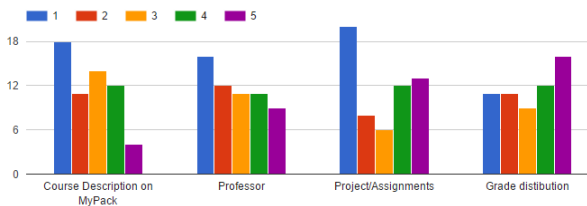

fig.7 Factors affecting the course selection

Result: Based on the result we got from the survey, it is safe to say that our initial assumption was incorrect and the most important factor students consider are the projects/assignments of that course. And because there is no suitable system for them to know about those details, we can assume that that was the main reason behind dissatisfaction of students for the selected course.

Q6) To what extent do you believe that the feedback of any particular course from strangers (Students who have already taken that course) are credible?
The core of our system design would be the reviews gathered from vast majority and mix of students who have already taken the course in previous semesters. If the students, in general, find those reviews credible enough to rely upon, then and only then can this system be of any help to them.
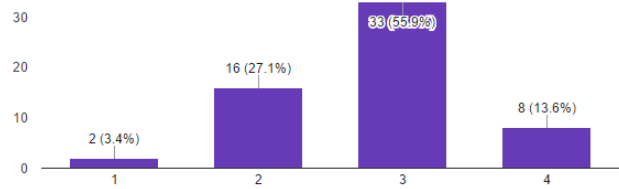

fig.8 Feedback credibility

Result: As per our expectations, Most of the responses (approximately 70%) were in favor of credibility. And since the application is only accessible to NC State students, most of them are willing to trust the information provided by others. About the rest 30% of negative reviews, we are hopeful that once they get acquainted to the application, it may sway their opinions.

Q7) To what extent are you willing to provide description/feedback about the course that you have taken?
We were interested to find the ratio of students who can give honest reviews about the course they have studied as their reviews will be the crux of the software and it can help the students in selecting a course.
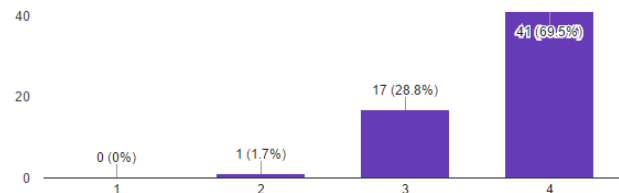

fig.9 Willingness to provide feedback

Result: Approximately 70% students were definite and 28% were willing to provide feedback to help their fellow

students. This clearly indicates the vast user base and potential database of reviews and feedback, which can easily be converted into helpful visualization for better course selection.

Q8) Considering that these feedback are only for the students and will not be, in any way, accessible to the faculties, Are you willing to share these course feedback under your original credentials/details?
This question was posed to get the number of students who are willing to reveal their identity so that other students can contact them for any relevant information they need about the course.
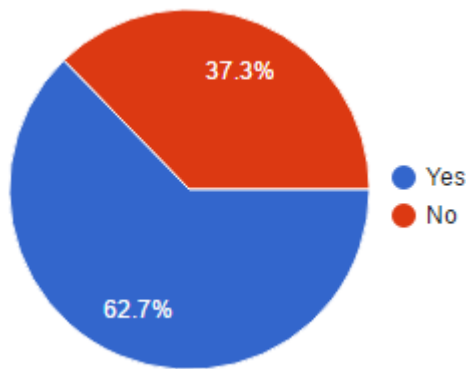

fig.10 User Anonymity

Result: The result shows that about 62 percent of our responders were willing to share their course feedback under their original credential. This was very important result for us as we can include a feature in our application which facilitates the direct contact between the feedback provider and potential application user. Thus, it can provide direct one-to-one interaction and better sharing of experience.

4. CONCLUSION

After careful evaluation of the study and drawbacks of the already existing systems, we can conclude that we require a well-designed course feedback/review system that not only gives information about the course content, but also takes into consideration various relevant factors based on their priorities.
1) Course description- Material/Course content
2) Professor reviews
3) Workload- Projects/Assignments
4) Grade distribution
5) Pre-requisite skills– tools/language
   At the same time, the system should also provide a hassle free way to attract students to share their feedback

and to provide a better visualization and most efficient representation of data to facilitate the ease of access.

5. PROJECT GOAL

In this section, we focus on documenting a problem definition X, our user base U, problems with the existing systems S, and finally the goal of our system G to eliminate those issues. Specifically, for our proposed project XUSG is defined in following ways.

X: The problem definition is to find a more efficient way to provide students with a proper feedback of the courses they are planning to take for the upcoming semesters. Due to lack of proper feedback, students often don't get the complete information about the course which hampers their ability to perform with full potential. Also, other interested students who couldn't enroll for the course suffer the disadvantage.

U: The user groups we plan to target are the Graduate students of Computer science department of NC State University, especially the first year students who are not much acquainted with the college system. The reviews will be provided by the seniors who have already studied the course in previous semesters.

S: Below is the summary of issues that we encountered in the current systems:
1)ClassEval: Reviews filled by students for any particular instructor/staff member or department-head are accessible to that particular person only and other students don't have access to those reviews.
2)Ratemyprofessor: On this website, a very limited number of reviews are available. As per our observation, we concluded that students generally use this platform while choosing a course but don't tend to provide the feedback of the same once the course is completed.
3)Enroll and drop: Inconvenient and inefficient

G: The goal is to design an easy-to-use system which helps students get all the desired information of courses and attracts them to post the reviews and help others.

6. FUTURE SCOPE

For now, we have only taken into account the computer science department of graduate school at NC State University, but the application can further be extended to accommodate any number of departments and courses in future. We also can impose anonymity and protect individual privacy while at the same time, allow communication between students by providing separate system

generated ID to each student so that students won't know each other by their original credentials but by unique student number. If need be, we can also restrict the quality of feedback by allowing comments and ranks on each individual feedback. In this way some extreme subjective or unrealistic comments will be ignored by most of the users of our application.

7. REFERENCES

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8. SPECIAL THANKS

1) bjdriuiu 2) bkchuiie 3) blcfoaue 4) cfcnaaai 5) chckoaio 6) cjglaeau 7) ckcseuiu 8) ddckoaeu 9) djcwuuea 10) dkdjuuoi 11) fccroaui 12) fgctaaia 13) fhfteeai 14) fjddaauu 15) fkfgieou 16) gcfheeii