RESEARCH ARTICLE

INCORPORATING SELF AND PEER ASSESSMENT WITH TUTOR ASSESSMENT IN EVALUATING STUDENT GROUP WORK

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ARTICLE INFO	ABSTRACT
	In tertiary educations, most of the courses are having group projects as one of the part of assessments in their curriculum. In computer science, especially for software engineering students the group projects are providing the necessary skills to gear for project management, have experiences in playing and maintaining different roles and members within the project group. Traditionally, the evaluators awards the marks or grades for the individuals or group members based on the contribution and coordination's within the group for the project. Sometimes the awarded marks for the students may be unfair to undeserving students or serving students, based on verbalized performance or oral presentation only. This paper is focused on the impact of group projects in course curriculum and the importance of self and peer assessments in accessing student's grade for the group projects. Surveys, interviews are conducted with the students and staff members to find the impact of the recommended approach in accessing the group project.

INTRODUCTION

University course curriculum describes a structure where at least one project is required to be completed by students during the course time. Students will accomplish the project in the middle of the course, or at the end of the course or projects will be within the modules as assessments. According to (Kennedy, 2005) states "The incorporation of group projects into university computing courses is wide spread". Projects can be done individually or in groups depending on the structure of the module or course designed by universities. Group projects means students will form a group of maximum five within them and split-up the tasks within themselves to complete the project. In final, the group members will consolidate the tasks and crop the project as final product. Presentations will be conducted and marks will be awarded to the students based on the verbal presentations. Normally same marks will be also awarded for group coordination.(Kennedy, 2005)describe problems in group assessment with the assertion that "some group members contribute more or less than others, students feel that awarding the same mark to all members of a group is unfair". Sometimes awarded marks will not be reasonable for the students who did not coordinate or not participate within the team.

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This brought the problem for the research and optionally suggested the peer with self-assessment along tutor valuation will help the group work.

Objectives

The following are the objectives for the article based on the problem

1. To evaluate group assessment methods and techniques
2. To identify techniques for peer and self-evaluation
3. To incorporate self and peer-evaluations as a technique for group projects assessment
4. To assess whether peer or self-assessment can be used for group coordination marks
5. To evaluate whether there is a major deviation and differences on marks allocated by individuals for peer assessment versus tutor mark

MATERIALS AND METHODS

Group work actually motivates the students to have good communication, interaction, work effectively for their task, gain knowledge, great involvement, eliminates conflict, and makes as problematic solver. (Gammie and Matson, 2007) describes group work as an enabler to students developing

interpersonal and leadership skills. According to (Davies, 2009) Group work can be classified as Formal group, Informal group, study group, self-managed group and project teams group. As to (Larry & Sweet, 2008) describes the group based work as "requires that the instructor oversee the formation of the groups so that he or she can manage three important variables: ensuring that the groups have adequate resources to draw from in completing their assignments and approximately the same level of those resources across groups, avoiding membership coalitions that are likely to interfere with the development of group cohesiveness, and ensuring that groups have the opportunity to develop into learning teams".

Potential benefits from group working

Group work provides different benefits from the group members and is an upright chance to develop the student's personality and skills. (H.M & A.W, 2008) states the students are having a ration of benefits "Group projects can help students develop a host of skills that are increasingly important in the professional world". Group work will also enforce the student's to have good skills appropriate to group or individual work. Some of the major benefits are listed as

- Learning styles will improve
- Make independent to think and work
- Talented to handle multifaceted problems
- Advance roles and responsibilities
- Gain multi-knowledge and multi-skills
- Having energetic communication skills
- Expand relations

Problems in Group Work from students and tutors

Both the students and tutors are fronting several difficulties from the group work projects. Foremost problematic subject in group work is that the tutor awards the mark or grade for the team, without knowing the team member's contribution level. Students are not coming forward to notify the synchronization happen within the team during the evaluation time.

General problems from students

- Less Coordination, affects quality and time factor to complete
- Less Enthusiasm, affects the establishment within the team
- Less Knowledgeable production, affects the excellence in the project work

General problems from tutors

- Evaluating the team works, affects the marks for all in the team
- Evaluating the individual work, affects the marks for the individual work
- Exactness of the production, affects to pattern the actual learning outcome.

Why peer and self-assessment with tutor assessment

It's must that all students should be assessed for work done for all the modules. Basically we have two types of assessments, formative and summative assessments. According to (Garrison, 2014) formative assessment is "part of the instructional process. When incorporated into classroom practice, it provides the information needed to adjust teaching and learning while they are happening. In this sense, formative assessment informs both teachers and students about student understanding at a point when timely adjustments can be made". (Garrison, 2014) describes summative assessment as " given periodically to determine at a particular point in time what students know and do not know. Many associate summative assessments only with standardized tests such as state assessments, but they are also used at and are an important part of district and classroom programs". Question points-out what types of assessment can be used to assess the group work.

(Orsmond, 2004) states the self-assessments by way of self-learning as "students who will be self-assessing the assessment will be include in the process of learning as well as work done". Peer and Self-Assessment with tutor assessment will have a great impact in assessing the group work for a project. According to (Garrison & Ehringhaus, n.d.) articulates about the Peer-assessment helps "When students have been involved in criteria and goal setting, self-evaluation is a logical step in the learning process. With peer evaluation, students see each other as resources for understanding and checking for quality work against previously established criteria". (Anon., 2007) states the Self-Assessment stances for "self-assessment makes it easier for pupils to contribute to target-setting". From both declarations illustrations the robust of the assessment pattern for group work. Tutor measuring score is necessity in the evaluating he project. Tutor assessing will show how the contribution was happen among them, how the task are circulated, how the production is aimed at the project and report like wise.

Methodology

For evaluating group work or projects, the Self and Peer-Assessment with tutor Assessment are recommended to assessing the project group work. The following Figure 1 describes the Self-Peer assessment with Tutor assessment process.
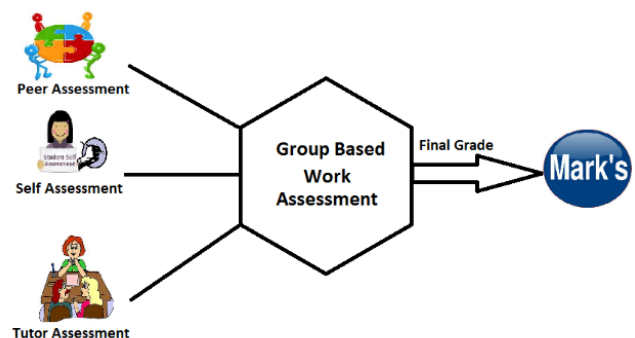

Figure 1. Self-Peer assessment with Tutor assessment process

This new process have been implemented and tested within a class of five groups with each of six students. Case study or Project has been allocated for each group separately from a pool of scenario. This will make the students to preference the finest they can work within the team members. Because of this, it will overcome the problems like some students always doing easy projects while others will be doing hard projects. After allocation projects students were supposed to provide a breakdown of task they would perform in writing. The project duration was given as three weeks since the type of software they produce are more of a prototype. The project questions are given as case studies and scenarios. Students are supposed to produce working software to be evaluated after three weeks elapse.

First, the student should do the evaluation for the work or contribution in the project based on definite criteria, this criteria can be prepared private for their modules. For example, a sample of self-evaluation criteria is shown in Figure 2 which used for survey.

Thirdly, based on this evaluation, the tutor can also have separate evaluation to consolidate the progression and afford the marks or grade for group members or can be for individual students.

Apart from peer and self-evaluations, students were assessed using traditional tutor assessment. Marks for peer and self-assessment were compared against tutor assessment to derive deviation and to find out whether we could use both assessments to arrive at final mark. The project valuation for tutor assessment was evaluated based on only 40% contribution coming from documentation and 60% from success of project presentation and final product. The project presentation can be awarded based on the following criteria which can have as project presentation skill for 10 marks, Dressing manner for 10 marks, group coordination for 10 marks, and knowledge of content 15 marks and answering skills for 15 marks.

Group Peer assessment Form
TO BE COMPLETED AT THE END OF THE PROJECT

Marks awarded to:						
Scale 0-5 5 is highest	0	1	2	3	4	5
Marks awarded by:						
Level of enthusiasm/participation						
Suggesting ideas						
Understanding what was required						
Helping the group to function well as a team						
Organising the group and ensuring things got done						
Performing tasks efficiently						
Reliability (incl. attendance)						
Technical ability						
Total						

Comments

Use this space if you wish to draw to the attention of the tutor any particular points about the way your group operated.

_____
_____
_____

Key: 0-very poor 1 poor 2 fair 3 good 4 very good 5 excellent

Figure 2. Sample Self Evaluation Form

Then, the student should evaluate the other students effort based on the definite criteria, this criteria can be prepared private for their modules. For example, a sample of Peer-evaluation criteria is shown in Figure 3, which is used of survey.

Individual marks were awarded based on knowledge of content and answering skills component. They were derived by applying a tutor weighting based on the individual students' overall contribution. The reason why I could not incorporate the self and peer evaluations because assessment depart have to have a uniform formula for evaluation.

GROUP PROJECT: PEER AND SELF ASSESSMENT

Title of your Group project...
Group Number
....
Your Name...
When your group project is complete, each member should complete a separate form of the assement. **THERE IS NO NEED TO CONSULT OTHER MEMBERS OF GROUP ON COMPLETION OF THIS**
Use the following categories to assess the level of contribution of each of your colleagues and yourself

3 outstanding   2 significant contribution   1 Little Contribution   0 No contribution

Assessment Categories	STUDENT DETAILS				
	Student 1 Name	Student 2 Name	Student 3 Name	Student 4 Name	Student 5 Name
Was she attending meetings regularily,panctual and co-operative					
Did he/she contribute ideas and suggestions for the product?					
How well did he/she listen to the partners idea and suggestions					
Did he/she accept a fair share of work?					
How well did he/she carry out tasks assigned by the group					
How would you rate his/overall contribution in the project					
How would you rate his/overall contribution in the project					
how did he/she contribute towards the preparation of the application					
Total contribution					

Comments
Use this space if you wish to draw to the attention of the tutor any particular points about the way your group operated.

_____
_____
_____

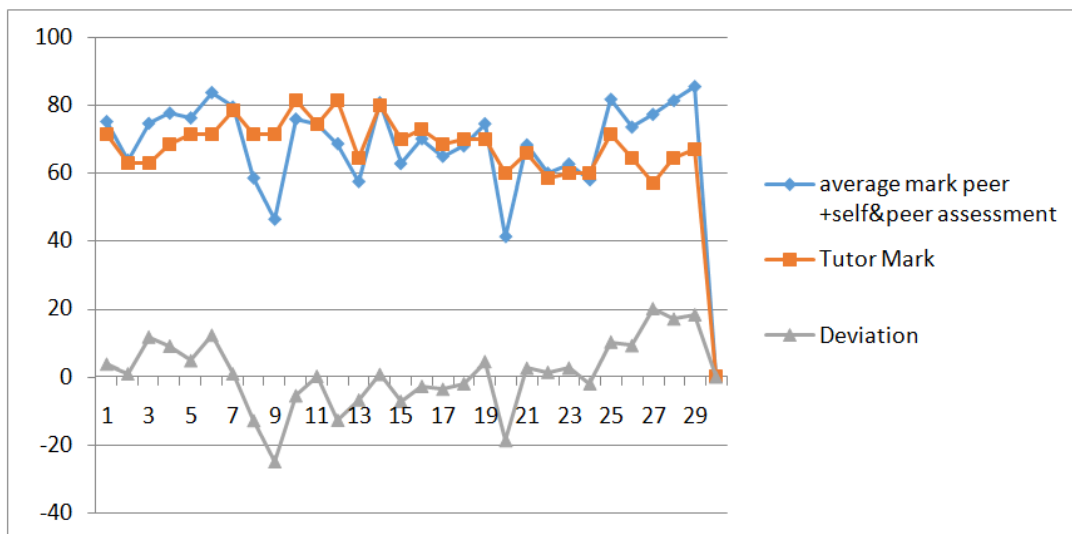**Figure 3. Sample Peer Evaluation Form**

Figure 4. Self- Peer Assessment with Tutor Assessment

However a comparison was done on these components versus the inputs from peer and self-evaluation. Incorporating peer- (and self-) assessment rating in deriving the individual mark addresses the issue of measuring the students' engagement with and contribution to both the group project process and its product. Where the peer- and self-assessment marks broadly confirmed the teaching staff's knowledge of the students, and also indicated the student's engagement with the assessment exercise, the marks were compared against each individual mark.

RESULTS

Based on the survey taken from five groups with six in each students, the data is analyzed and the following graph as

Figure 4 has been driven. Basically this graph shows the final marks which comprises the self-assessment, peer assessment and with tutor assessment.

From Figure 4 it can be found out that in some instances some students provide for themselves high marks versus evidence provided in the presentations while at time a tutor might award high marks for student who did not contribute much in the project due to the fact that some are good presenter and hence get away with penalizing.

From observation made there is need to incorporate both approaches where the tutor has to moderate some of the marks as there are not in tandem with presentation outcomes. One technique that was suggested is to use log books and meetings logs to check for consistence with the peer evaluations. students were generally not giving themselves low marks for self-evaluation hence there was a bias on the outcome

Conclusion

Authors recommends to have a Peer and Self-Assessment along with the tutor assessment to evaluate the process of group work and also it will help the students and tutors to have a sufficient communication or understanding during marks split-up for group works in project.

This has been implemented for a class and found most powerful than other assessment model for group work. The author(s) recommendation is to use this method for the universities having the project as group based assessment.

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