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A Model of Formative Assessment and Self Regulated Learning for Large Classes: An Interface between Internal and External Feedback

ABSTRACT: *This paper presents how formative assessment can be used in large classes. In particular, this paper discusses the use of both internal and external feedback and how students may capitalize on using external feedback to help them process and take control of their own learning, making them self-regulated learners. A key argument this paper presents is that proper planning of assessment strategies in large classes provide avenues for students to use feedback from their teachers and their peers to guide their own feedback strategies in redesigning their works. Finally, a model of formative assessment angled at both external and internal feedbacks is proposed. The results proved that formative assessment is an important classroom tool in handling large classes. Particularly, in using formative assessment, the students take charge of their own learning, thus, giving their internal feedback which is critical in defining and redefining their works. Further, the results showed that timely feed-backing is necessary in order to achieve a well designed formative assessment plan.*

KEY WORD: *Formative assessment, large classes, planning of assessment strategies, internal and external feedback, and self-regulated learners.*

IKHTISAR: *Makalah ini menyajikan bagaimana penilaian formatif dapat digunakan di kelas-kelas besar. Khususnya, makalah ini membahas penggunaan umpan-balik internal dan eksternal dan bagaimana siswa dapat menggunakan umpan-balik eksternal untuk membantu mereka memproses dan mengontrol pembelajaran mereka sendiri, yang membuat mereka menjadi siswa yang mampu mengatur diri mereka sendiri. Alasan utama disajikannya makalah ini adalah bahwa perencanaan strategi penilaian yang tepat di kelas-kelas besar memberikan kesempatan bagi para siswa untuk menggunakan umpan-balik dari para guru dan teman-teman mereka untuk menuntun strategi umpan-balik mereka sendiri dalam merancang kembali pekerjaan mereka. Akhirnya, suatu model penilaian formatif berbelok pada umpan-balik internal dan eksternal yang disarankan. Khususnya, dalam menggunakan penilaian formatif, para siswa mempertanggungjawabkan pembelajaran mereka sendiri, sehingga memberikan umpan-balik internal yang penting dalam menjelaskan dan menentukan kembali pekerjaan mereka. Selanjutnya, hasil kajian menunjukkan bahwa pemberian umpan-balik yang tepat merupakan hal yang sangat penting untuk mencapai suatu rencana penilaian formatif yang dirancang dengan baik.*

KATA KUNCI: *Penilaian formatif, kelas besar, perencanaan strategi penilaian, umpan-balik internal dan eksternal, dan siswa yang mengatur sendiri.*

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INTRODUCTION

Methods on delivering courses for large classes have not significantly changed, as observed by G. Gibbs and A. Jenkins (1992). Despite this, the pedagogical implications of large classes, however, continue to rise (Brookhart, 2009). From among the different concerns of teachers handling large classes, it is assessment that is given less priority and attention (Rust, 2001) resulting in it being likely done less and/or less often creating negative effects on student learning and achievement. Assessment plans, experts argue, should be a major part of learning and teaching strategies (Gibbs & Jenkins, 1992; Carvone, 1998; and Rust, 2001).

Assessment, as a classroom undertaking, performs as the conduit between teaching and learning. A useful distinction on assessment is its function – a test can either be *formative* or *summative* (Brown, 2004). A *formative assessment* evaluates the students in the process of “forming” the competencies and skills with the goal of helping the students continue their growth process (Brown, 2004). Due to its intention of helping students make connections between the learning goals and the amount and type of work they do, formative assessment gets information about students *from where they are*, so that the teacher can give feedback or suggestions about how they might move closer to their learning goals (Brookhart, 2009). For all practical purposes, therefore, virtually all kinds of informal assessment are *formative* (Brown, 2004). They have as their primary focus the ongoing development of the learner’s language, skills, and comprehension. So, when a teacher gives a student a comment or a suggestion, or calls his/her attention to an error, the feedback offered is to improve the learner’s ability and decision making.

The literature classroom, being an avenue for cultural information (Showalter, 2003), demands for more goal setting to achieve literary awareness and further develop cultural identity among the students. For Tenbrink (cited in Cruz & Daroy eds., 1988), if teaching literature aims for teaching literary competence, which may include cultural truth, then assessment is also geared towards developing such awareness.

Formative assessment, as a classroom tool, helps the literature teacher to have basis in enhancing the imagination and critical faculties of the students by engaging them in assessment tasks and activities which can give them, still according to Tenbrink, “*increased achievement, increased understanding of how to learn, and increased control over their own personal learning*” (cited in Cruz & Daroy eds., 1988).

THE INTERFACE BETWEEN INTERNAL AND EXTERNAL FEEDBACK

Assessment poses the biggest hurdle in handling large classes (Nicol & Boyle, 2003). Chris Rust (2001) concurs when he pointed out that assessment is either likely to be done less well or the amount of assessment inside the large

class will be reduced. As a result of less assessment done in the classrooms, less feedback is given at the perfect time the students need it. With less detailed feedback given, it is much harder for students to see what their strengths and weaknesses are and how they can improve in the future. To P. Nightingale *et al.* (1996), such scenario could lead to a decline in the future performance, and to a continuing spiral of poorer performances (and/or outputs).

In a comprehensive sense, Barr and Tagg (1995) posited that “learning is now more commonly conceptualized as a process whereby students actively construct their own knowledge and skills”. Students, therefore, internalize meaning and arrive at conclusions even before the teacher discusses and assigns an assessment technique. This analysis is backed by the literatures which specify that *formative assessment* is a process by which feedback serves as a tool which “continuously monitor” the students’ level of attainment in reference to the learning objectives. David J. Nicol and Debra MacFarlane-Dick (2006) explains this properly: “the teachers transmit feedback to students about what is right and wrong in their creative work, about its strengths and weaknesses, and students use this information to make subsequent improvements”. Further, feedback given by the formative assessment provides a scaffold to the students’ learning. However, with large classes, *feed-backing* is generally taken as significantly the teacher’s role and responsibility.

What is crucial, however, is the transmission view of feedback, as teachers face increased class sizes every year. One way of addressing this issue is to re-examine the nature of feedback (Nicol & McFarlane-Dick, 2006); and who provides it (teacher, peer or *self*) in relation to its effectiveness in supporting learning processes. It is important to note that feedback may come from the students, themselves, better known as *internal feedback* or *self regulated learning*. P.R. Pintrich and A. Zusho (2002) defines self regulation (*internal feedback*) as “an active constructive process whereby learners set goals for their learning and monitor, regulates, and control their cognition, motivation, and behaviors guided and constrained by their goals and the contextual features of the environment”.

This definition sets the parameters of internal feedback as: (1) It happens not only during extrinsic learning but also during a student’s motivational processes; and (2) Although it is a process that the students take on their own, the teacher still designs and determines the assessment requirements.

Internal feedback, for all its worth, could not be fully detached from *external feedback*. Still, the link between *internal feedback* and formative assessment supports the *external feedback* which may come from a peer or by other means like computer and on line sites (Zimmerman & Schunk, 2004). The teacher, therefore, must be able to integrate both assessment techniques in the classroom. Similarly, D.R. Sadler (1989) identified three conditions necessary for students to benefit from feedback in academic tasks. He posited that students must know: (1) What good performance is; (2) How current performance relates to

good performance; and (3) How to act to close the gap between current and good performance.

In the same study, D.R. Sadler (1989) gave an important observation that “students must already possess some of the same evaluative skills as their teacher in order to compare actual performance with a standard and to close the gap between the two”. To generalize, *internal feedback* allows the students to test their abilities and skills to provide feedback on their personal works to address “evaluation of learning in the process of forming their competencies and skills with the goal of helping achieve a continuity of the growth process” (Brown, 2004).

Despite this ability and responsibility given them, David J. Nicol and Debra MacFarlane-Dick (2006) cautions, students do not always have full control of their learning. “Learning tasks set by teachers, marking regimes, and other course requirements are not under students’ control”, they argued. R. Stiggins (2005) explained that students are likened to a teacher because they, too, are data-based instructional decision makers who can set their own goals and evaluate their own learning through the proper guidance of their teacher. R. Stiggins supports D.R. Sadler (1989) and B.J. Zimmerman and D.H. Schunk’s (2004) opinion that students do self regulation in order to address the expected “criticism” of his/her work or performance.

On the other hand, Black and Williams (1998) argued that “all activities undertaken by the students will provide information to be used as feedback to modify the teaching and learning activities in which they are engaged in”. *A good external feedback, therefore, results to good self-regulation (internal feedback)*. Finally, the report of David J. Nicol and Debra MacFarlane-Dick (2006) identified seven principles of good feedback practice to facilitate self-regulation. The principles were culled from the literatures supporting the claim that good feed-backing results in good self-regulation.

Here are the seven principles: (1) Helps clarify what good performance is – goals, criteria, and expected standards; (2) Facilitates the development of self-assessment reflection in learning; (3) Delivers high quality information to students about their learning; (4) Encourages teacher and peer dialogues around learning; (5) Encourages positive motivational beliefs and self-esteem; (6) Provides opportunities to close the gap between current and desired performance; and (7) Provides information to teachers that can be used to help shape the teaching (Nicol & MacFarlane-Dick, 2006).

THE CASE OF LARGE CLASSES

It is difficult to give a specific number which may consist a large class. For A. Krueger (1999) and C. Hoxby (2000), a large class may consist of 56-89 students in Higher Education. Current literatures show how large classes result in significant teaching challenges. Chris Rust (2001) reports that assessment:

[...] is the most likely to be taken for granted in large classes. It is either likely to be done less well rigorously and with less and more superficial feedback to the students- and to take longer to be returned. Or the amount of assessment on the course will be reduced- and it is likely to be formative assessment which will be reduced (or even done away with completely) first (Rust, 2001).

These in mind, this research was undertaken to offer possible strategy, if not solution, to the issue of assessment in handling large classes.

A Conceptual Model of Formative Assessment and Self-Regulated Learning for Large Classes. The conceptual model given here is based on the model suggested by David J. Nicol and Debra MacFarlane-Dick (2006). However, this research is focused on formative assessment in large classes and, thus, the chances of going through *internal feedback* of the students are given emphasis in this proposed model.

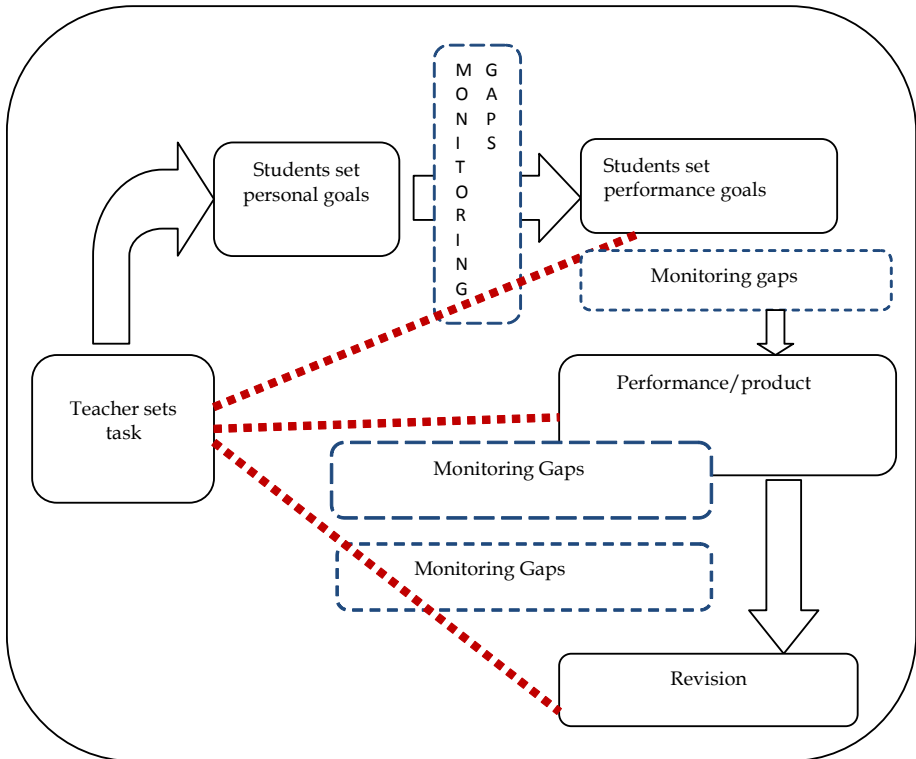


Figure 1

In the proposed model, the teacher sets the task for the large class. A task may come in the form of performance, product, or output. From the given task, the students draw their own personal goals which reflect their personal

understanding and, probably, interpretation of the task given by the teacher. From their interpretation of the task, the students assess (even re-assess) their performance goals. At this point, the students link their interpretation of goals set by the teacher and their capacity to perform the task or meet the goal. The students undergo the first monitoring gap or internal feedback at this stage. Based on each student's internal assessment, he/she rechecks or re-assesses his/her performance goals. An external feedback from the teacher, represented by the red dotted lines, is shown at this point of the assessment plan. The comments play a very crucial role because they result in further internal feedback of the student. The initial performance goals set are now raised or changed.

The newly established performance goals become the new standard for the presentation of the performance or goals. The student is now ready to do another round of self-assessments using a rubric. The assessment is based on the prescribed standard of the product or performance (set by the teacher). Further, the self-assessment addresses the gap (if there is) between the standards set and the output. Peer assessments provide the external feedback to engage the rest of the class.

Finally, the student uses all available feedbacks to generate outcome: (1) externally observable — which is the final output after revisions done; and (2) internal outcomes — developed and enhanced like better understanding, more defined goals which are observable while the students are engaged in tasks.

METHOD

Participants. The participants in this study comprise of senior college students enrolled in G-Lit 02 (Masterpieces in World Literature) who belong to the BSE-English academic program. The two sections consist of 32 and 28 students respectively. Based on the definition set by A. Krueger (1999) and C. Hoxby (2000), this “merged class” is considered a large class.

The class was informed that their major requirement is to read, analyze, study, and discuss, using different strategies, one world novel. The oral presentation is scheduled on the final two weeks of the semester. They were further informed that a series of formative assessments will be conducted throughout the semester to ensure that a “good” oral report will be rendered. To further explain the assessment plan, a calendar was provided to them. The calendar, which consists of submission dates, conference schedules, return of drafts (for feedback), and oral report schedules, reflects a “planned” formative assessment. According to B. Bell and B. Cowie (2001), a “planned” formative assessment is used by a teacher to obtain information from the whole class about progress in learning.

Project Mechanics. The major task of the teacher-researcher was to plan the schedule of the external feedback for all works/performance that the students submit. The teacher worked around her schedule to meet the demands of the assessment procedure for the class. As stated earlier, the *external feedback* is necessary to provide a direction or even a re-direction to students' works.

Grouping the students is one of the highlights of this “planned” formative assessment. The groupings were expected to lessen the bulk of work or output that the teacher, and even peers, will evaluate. Six (6) groups were formed for each class, with a total of twelve (12) for the two sections. Each group was assigned a novel. As the students worked to achieve a common goal, they also worked for their individual goals. The rationale for this plan is to give as much chance for *internal feedback* as possible.

The following are the mechanics observed throughout the project:

First, the students were given a copy of the calendar where the submission date, both for individual and group requirements are scheduled. Further, the dates on which the teacher returns the students’ requirements, thereby providing *external feedback*, were also included in the calendar. The use of the calendar for planned assessment is supported by Black and William (1998) and Chris Rust (2001) who cited that a calendar “gives students a clearer strategy for self (*internal*) assessment”.

Second, each group is assigned a novel to work on. The novels were chosen based on their representation of the major literary countries of the world. The novels also represent different periods of publication. The following novels were given as assignments to the 12 groups: (1) *Illustrado* by Miguel Syjuco of Philippines in 2010; (2) *Never Let Me Go* by Kenzaburo Oe of Japan/UK in 2005; (3) *The Hours* by Michael Cunningham of USA in 1998; (4) *The White Tiger* by Aravind Adiga of India in 2008; (5) *Things Fall Apart* by Chinua Achebe of Nigeria in 1958; and (6) *The House of the Spirits* by Isabel Allende of Chile in 1982.

Third, the students were instructed to do self and peer assessments. Rubrics for these purposes were provided. The rubrics were adopted from Intel Education website. The use of the rubric supports formative assessment because it qualifies the learning and its processes (Juwah *et al.*, 2004). Peer assessment is one way of addressing and eliciting *external feedback* (Juwah *et al.*, 2004). Self-assessment, on the other hand, formalizes the *internal feedback* or the self-regulated learning.

Fourth, the submitted works were not graded, rather, tallied using a scale which reflects that a requirement is counted depending on the number of drafts submitted. Having only one (1) draft meant that the student or group understood the *external feedback* given to their project/paper/output. Further, a good *external feedback* is taken to mean that a student engaged in a lot of *internal feedback*.

PROJECT OUTCOMES

Throughout the four and one-half months (1 semester) of implementation of the formative assessment project, the results are summed up as follows:

First, in terms of submission of requirements, all students met the submission dates which resulted to better and more timely *feed-backing*. The proper timing of feedback has resulted in better quality of submitted papers.

As part of the mechanics, the teacher gave students chances for revision of papers based on assessment done by she herself or by the students' peers (*external feedback*).

Figure 2 presents the number of students who did revisions on all papers submitted. This data shows a significant decrease of number of paper revisions. This explains that, as the project progressed, the students were able to assess themselves well (*internal feedback*).

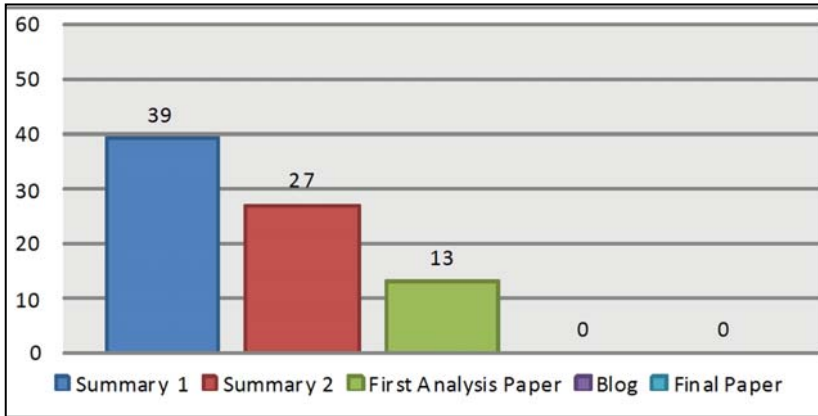


Figure 2:
Number of Students Who Revised Their Works

As a direct result of better *internal feedback*, the group works yielded better outcomes as shown by figure 3. The data reveals that in all 3 requirements for each group, only the first requirement – the annotated bibliography – was revised by more groups. This data further shows that as the students learned how to do *feed-backing* within the groups, not to mention the external feedback provided by the teacher (for the first draft), they have also learned how to write better papers.

Second, the use of technology-based activities, a blog (individual requirement) and Power Point presentation (group requirement) proved to be the most effective activities for the students. Notice that both figures 1 and 2 show that no student was asked to revise their blogs and only 2 out of 12 groups were advised to re-submit their power point presentation. This could mean that at their age, the students are fond of blogging and are knowledgeable of Power Point presentations.

It is also important to note that the students were required to submit a self-assessment using a rubric. In the same manner, all members of each group are required to give assessment of their prepared Power Point presentation. These samples of *internal assessment* are coupled with an *external feedback* as each group is required to have three classmates from different groups assess their

works. The decreased number of groups asked to resubmit their works show that the (internal as well as external) feedback helped the students produce more quality works.

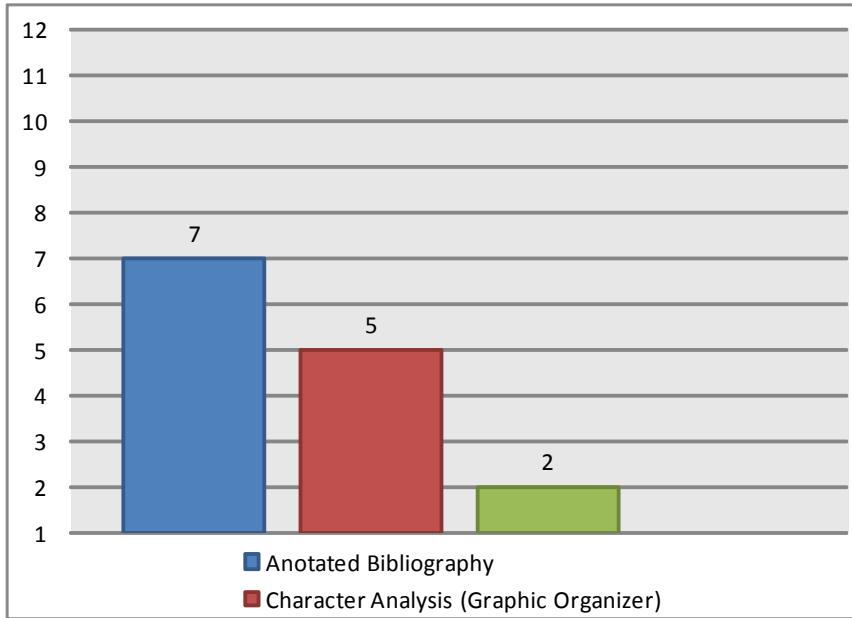


Figure 3:
Number of Groups Who were Asked to Revise Works

Third, finally, the tally on the number of requirements counted in favor of each student and group is shown on figure 4.

The data shows that, in general, all the requirements were handed in by students and groups with fewer revisions, if there are any. Less drafts submitted meant more students received credit for their individual and group works. The credits received by the students were taken into consideration in giving their final grade for the oral presentation.

The presented charts clearly show that in all requirements, the students were successful in meeting the standards set through using formative assessment techniques like *internal* and *external feedback*. As it was the intention of this research to show how formative assessment may help the students in achieving higher goals in their studies, the number of designed self, and peer assessment reflect an avenue for the students to determine the most effective modes of engagement to ensure formative assessment.

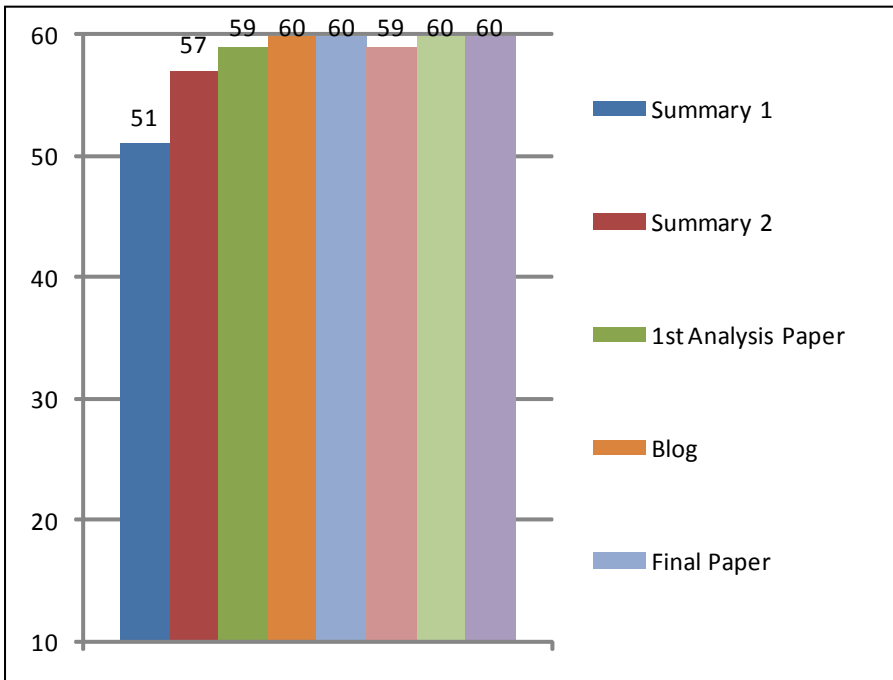


Figure 4:
Tally of the Number of Outputs/Requirements Counted in Favor of Students

CONCLUSION

This paper has further argued the need to use formative assessment in classrooms. Further, this research discussed the use of both *internal and external feedback* for a better formative assessment plan in large classes. Despite the major setback presented by using formative assessment in classrooms, i.e. how teachers will plan the entire procedure and how to find time to give feedback on students' works, the results outdo the anticipated setbacks. The quality of submitted works, not to mention, the experience of students who go through the process of internal feedback, all reflect positive classroom settings. Through the experiences presented in this paper, the researcher hopes that teachers will appreciate the value and importance of using formative assessment.

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The Teachers at the Vocational Senior High School
(Source: Personal Album of the ASPENSI Bandung, 20/5/2012)

The major task of the teacher-researcher was to plan the schedule of the external feedback for all works/performance that the students submit. The teacher worked around her schedule to meet the demands of the assessment procedure for the class.