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# INTEGRATING REFLECTION IN STUDENT PROJECTS

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**This paper describes the student project model and presents findings to show that the adopted model was effective in the development of reflective practice and deeper learning. The model utilised the language and profession-related knowledge acquisition, it allowed for individual student responsibility and collaboration; it encouraged students to reflect on what they wanted to learn, how best to do this and how they would knew what they learned. The students also assessed their peers using criteria defined in advance. All of these elements were those endorsed by the view of aligning curriculum with student learning outcomes and learning outcomes assessment. The results were completed projects, acquired knowledge, and improved generic and specific competences.**

*Key words: learning English, reflective teaching and learning, peer assessment, skills, competences*

## *1. INTRODUCTION*

This paper is one in a series of accounts of attempts at fostering reflective learning and teaching of English (Knežević, 2008, 2007, 2005, 2004). Student projects are an avenue to encourage reflection and deep learning which occurs best when there is an intersection of motivational context, student activity, peer interaction, ownership (of learning and outcomes) and teaching (Biggs, 1989:17). Biggs (2003:16-17) further associates deep learning outcomes with a teaching environment that uses teaching and assessment methods that support the explicit aims and objectives of the course.

The idea behind the project was to develop a model that could enhance a reflective approach to teaching and learning in first-year students at the Faculty of Maritime

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Studies where English is a core subject with four contact hours a week. Our point of departure is that reflection is a learned and time-consuming process; it is a skill that needs to be honed. It is widely accepted that students need both knowledge and skills to succeed in their future profession. The need is driven not only by demands for high-performance employees who can plan, collaborate, and interact well with other employees, but also by the need to help students learn to be accountable for what they are doing now or will do in their future profession.

Seventy-three students participated in the project. On the one hand, this project was an attempt to enhance students' cognitive abilities, and raise their awareness of the purpose and the process of learning. On the other hand, it was an endeavour to raise English proficiency level, broaden students' profession-related knowledge and improve a range of generic and subject specific skills and competences. In that way the students would deepen their understanding of project-based learning, would make a step towards an investigative approach to learning and would take responsibility for their learning.

At the beginning the students were hesitant about the project; this type of project was new to them. They thought it would add on to their workload, and were deeply uncomfortable about the reflective paper. What seemed to be the biggest problem was expressing personal thoughts and concerns. We, however, thought this was one more reason for adopting this new approach to learning about the subject / course and about themselves. Giving students the opportunity to express their personal expectations, concerns, dilemmas, experiences and feelings was supposed to motivate them to perform well.

## *2. AIMS*

The aims of this project were to motivate students to learn new contents and generate new profession-related knowledge, to make changes in the perspectives of looking at the outcomes of learning and students' development, and to align the curriculum with student learning outcomes and learning outcomes assessment (the teacher and peers).

The primary aim was to integrate reflection into the learning process, to raise questions about the purpose of learning, to bring about change in relation to the entire process of teaching, learning and assessment, to foster a "learning-to-learn" competence (European Commission, 2004) that:

> ... comprises the disposition and ability to organise and regulate one's own learning, both individually and in groups. It includes the ability to manage one's time effectively, to solve problems, to acquire, process, evaluate and assimilate

> new knowledge, and to apply new knowledge and skills in a variety of contexts — at home, at work, in education and in training. In more general terms, learning-to-learn contributes strongly to managing one's own career path (p. 8).

The objectives of the project were to further hone the four English language skills, to maximise students' language use, to develop skills needed to engage students in small-scale-projects, and to develop a range of project-related skills like team-working, Information Technology (IT) and presenting skills.

## *3. METHOD*

The project ran for fourteen weeks and the timeline of the project was set out well in advance. In order to fully implement project-based learning, the project was divided into several steps, each also with a purpose of developing specific English language skills. A total of 73 (70 male, 3 female) students took part in the projects. They were attending English classes in the first year programme at the Faculty of Maritime Studies, Rijeka.

At the very beginning of the project the students were given handouts with specifically outlined requirements and deadlines by which a particular assignment had to be completed. They were also invited to tutorials and consultation hours on a regular basis throughout the project life.

The students were first teamed in pairs. We stressed the importance and advantages of working in pairs, and let the students express preferences with regard to whom they would work with. Each pair was then instructed to select a topic of their own interest, conduct a review of the literature and search the Internet. The only limitation was that the topic should be related to the syllabus. Next, the students were told to write a short paper on their personal expectations. They were encouraged to write about their learning goals, expectations and concerns, and to envisage difficulties. The following step was to write a project paper on the selected topic. This particular part of the project was intended to hone students' pair work skills as well as broaden topic-related knowledge. Another important aspect of this stage of the project was acquisition of standard forms of academic writing in English. After having written the paper, the students delivered a five-minute power point presentation. They were asked to highlight the main points in a coherent and cohesive way that would demonstrate their speaking and presenting skills. As for the rest of the class, their task was to listen to the peers-presenters and assess them using prepared assessment forms. Lastly, each student had to write a reflective paper. They needed to reflect back at the project, critically evaluate their work, compare the project outcomes with the expectations

they had at the beginning of the project and elaborate on any (what) change that was brought about.

### *4. ASSESSMENT*

Students' final grade was based on the project paper, power point presentation and the reflective paper. All students basically met the requirements of the student project action plan and the set assessment criteria. The teacher and student marks were used for summative purposes. The overall assessment, 30 European Credit Transfer and Accumulation System (ECTS) credits of their final grade, was based on the students' ability to prepare, organise and hand in the material relevant and related to the syllabus using a variety of sources. The students were asked to give a maximum of five-minute oral presentation of their projects, a generic competence in nature, and to write a reflective paper of three hundred words (they were given Reflective Paper Guidelines in advance). The final mark was based on the average taken from everyone's scoring.

Presentation. The assessment of the presentation involved two key stages.

a) Peer assessment (10 ECTS credits – students first assessed by peers).

The assessment grid included components like topic / content, structure, sources, specialist material and a marking scale with responses ranging from 5 (highest value) to 1 (lowest value). The students were also allowed to provide open-ended comments for each individual component allowing for any unexpected responses / observation that had not been considered in the marking scale. All were collected at the end of each presentation.

b) Teacher assessment (10 ECTS credits – students second assessed by the teacher).

The teacher assessed students' fluency, lexis, accuracy, cohesion and coherence in the presentation. A marking scale with responses ranging from 5 (highest value) to 1 (lowest value) was also applied.

Reflective paper (10 ECTS credits – papers marked by the teacher). The reflective paper was designed to determine: a) students' level of engagement during the project; b) whether their expectations measured the outcomes; c) whether they felt they improved their proficiency in English, IT, presenting and team-working skills. The central argument was the importance of student reflection on learning. The students were given the opportunity to voice their thoughts on the process of learning (about the topic, working in pairs, project findings, experience of learning, uncertainties, shaken / gained / restored confidence). They compared their expectations with final

reflections: Was there a mismatch? Did they learn? Did they approve and / or criticise certain aspects of new learning experience?

## *5. FINDINGS*

Choice of topic

In the first part of the project the students (N = 73) wrote about their personal expectations. The samples taken from the students' reflective papers are in italics and unedited. The students were given basic guidelines that would help them organise their thoughts in a coherent way. They were asked to explain the rationale behind the choice of topic and give thoughts on their expectations of the project, themselves and their partners. A great majority of the students, 64.38%, reported that the topic was interesting / important for their future profession and they wanted to learn more about it: "I have chosen to write about bulk cargoes because it seems interesting and I would like to learn more about it."; "When I started thinking what to present and explain in this project, suddenly I realized that I'm in the business of distributing different kinds of ship safety equipment for nearly thirteen years and after so many years of practice there are so many things that I don't know". 23.29% of the students failed to explain the choice they had made. 12.33% wrote that the topic was related to their future profession, they thought it would be easy to find the literature in the field and they already had some prior knowledge of it: "I think that there will not be any problems because I'm good at English and there is so much literature on the topic".

Expectations

The findings showed that the majority of students, 64.38%, expected to broaden their topic-related knowledge. 36.98% of them hoped to improve their English: "I hope that my knowledge of English will be better after this project." Others wrote about the need to take a positive attitude to pair work, to improve IT skills, and enhance cognitive abilities: "Working in pairs is much interesting and simpler because we fulfil each other and at the same time we learn to collaborate, to help and tolerate, which is of great importance on every ship." The students expected their partners to be responsible and hard-working. However, the findings also suggested that 56.16% of the students envisaged potential difficulties: "I think that the most difficult part of my student project will be writing it."; "The only problem for me could be to find reliable information written by professional people." 20.55% of the students expected language problems: "We might have language problems because of translation of certain terms and words including pronunciation. We will probably have problems with grammar." 8.22% were concerned with finding the literature

in the field, and 8.22% of the students thought that limited background knowledge might be a problem: "The main problem is that I have to keep up with my partner who has maritime background and has finished maritime high school. I'll have to try harder to understand things that come natural to him." 5.48% of the students were concerned with the oral presentation: "I'm a little scared of the oral presentation of the project and I think that that will be the biggest problem for us", and 13.7% of the students expected no problems whatsoever. Many students stated that this was their first project of the kind. One of them wrote: "Personally, I have never done this kind of project, so I am still at odds with it."

Reflective paper

Expectations and outcomes. A great majority of the students, 87.6% to be precise, submitted their reflective papers. Of the 64 papers we received, a daunting activity for many students, 37.5% of the students reflected back on what they had expected of the project, 29.69% reported that the project outcomes lived up to their expectations, others confirmed expectations without evaluating them. One student wrote: "I did not learn much about the topic, but I gained different kind of knowledge".

The majority of students, 64.06%, reported that they had broadened their topic-related knowledge: "I have fulfilled all my expectations: to improve my knowledge about tankers, to develop language and communication skills and to have fun working with my partner." 26.56% of the students reported improving their presentation skills: "I'm very proud because I gained and developed new skills like presentation skills...", whereas 23.44% stated they enhanced their language proficiency. 18.75% of the students expanded their topic-related vocabulary, and the same number of students stated that they improved their team working skills: "We have learned some new information about computer memories and it will definitely help us in our further learning about computers. I also think that my team work and speaking skills are improved."

Thinking about the process of learning. 12.5% of the students stated that working on this project changed their way of thinking about the process of learning. For example, one student wrote that being introduced to the project-based learning and being able to hone a variety of skills at the same time influenced his way of thinking about how one learned and, consequently, about how he learned: "With this concept of learning and skills presentation I haven't dealt with until now, and for me that represents big turning point in the way of thinking and finally the way of learning. Another student claimed that the project affected and developed his logical thinking: "Because it is a problem solving based learning I significantly increased ability to think logically." 7.81% of the students thought that their way of learning did

not change at all nor did they improve their language skills: "Regarding my personal progress, I can't say that there is any specific improvement because I still reason the same way as before, and my spelling has remained the same".

Pair work. As for working in pairs almost all students described their partners as "responsible", "serious" and "hard-working". Only 1.56% of the students expected their partners to be more involved in working on the project: "I expected more interest from the side of my partner." The students generally enjoyed working in pairs because it was easier and more fun. Some stated that this was the first time they worked in pairs and they were excited about it as it was something new to them, a kind of a challenge. Most students felt good in the project because they thought this way of learning was fun, innovative and allowed them to be creative and express their opinion: "It is an innovative way of learning and it gives us the opportunity to express our opinions and feelings about certain topics." "This is the first time that I have the opportunity to express myself." Only 6.25% of students wrote they were anxious at the beginning of the project, mostly because they were afraid of failure, did not know what to expect or they felt lost because they did not know where to start: "During the project I felt a bit lost, because of the complexity of maritime English and grammar."; "I was afraid if everything will look just like I imagined."

Time management was the major problem followed by fear from public speaking. The students were concerned that five minutes would make their presentations "superficial". As one student summed it up "All that work and then, cut it short".

What would I change? When asked what they would do differently the next time 18.75% of the students wrote: "There's always room for improvement", whereas 15.63% said they would change their oral presentation. 12.5% of the students were confident of the work done; they would not change a thing because they thought they did their best: "We probably wouldn't change anything in our work because we did our best and we thought for every detail while we were working." 7.81%, however, would try harder next time, 6.25% would conduct literature search more thoroughly and 3.13% would choose another topic. One student, for example, wrote that the project changed his perception on projects in general explaining that what had seemed very difficult and complicated eventually turned out to be quite all right. He wrote: "When the teacher told us what we should do, I almost had a fit. What do I need that for?" He went on describing how he changed his mind realising the project was very useful for developing a range of skills and acquiring new knowledge. But even though he found working on the project fun, he concluded by saying "All in all, I still hope we will never have to do a similar project."

## *6. DISCUSSION*

The findings of the student project described in this paper demonstrate that the perception of students' involvement in the project, and success of the project in general, is determined by how they approach the task, how the pair bonds and how well they collaborate. However, the same findings also demonstrate that the success of peer assessment in the student project depends on how the project is set up and managed. A great benefit of peer assessment is that it can trigger reflection on the student-assessor's own work. And it leads to a greater understanding of what is needed by teachers for assessment. It is equally important for students to hone and demonstrate an ability to stand back from their work and assess fairly. A further tangible benefit of peer assessment is that everyone is kept in the picture by defining criteria how credits are allocated, by implementing simple assessment system.

However, specific issues need to be highlighted. As presented in the findings section, most students chose their topic because they thought it was interesting / important and wanted to learn more about it. This may indicate the time and effort they wanted to invest. The majority of students expected to broaden their topic-related knowledge, expand their vocabulary and improve their English. Formulated in such a way, the expectations seem rather general and superficial which could be due to the fact that the students were unfamiliar with projects of this kind and did not know what to expect. Or they wrote what they thought would please the teachers. Or the students were simply reluctant to reflect on and monitor their personal progress in the project.

The students had varied English proficiency levels to start with. This is one reason why they were invited to tutorials where they would be instructed what to do and how to proceed.

Contrary to our expectations, the students did not recognise the purpose and importance of tutorials. Consequently, many students had problems with their project paper (proper referencing, changing the topic, guidelines not followed), with the power point presentation (too much text, visually difficult to follow, sources not specified) and the reflective paper. This corroborates our stance that tutorials and the teacher's guidance through the project are absolutely necessary.

The reflective paper was a thorny problem. The students were intimidated by the idea to write about their feelings and inner thoughts, let alone in English. This raises several issues, for example the issue of the "first time". Firstly, as they reported this was the first time they were given the opportunity to express themselves, the first time they critically evaluated themselves, the first time they assessed their peers (interestingly, none of the students wrote "It's your job to assess, not ours."), and the first time they were asked to reflect on their own progress and the way of learning.

Secondly, writing skills are not sufficiently honed in Croatian schools. And thirdly, academic writing is rarely if ever taught.

A problem perceived was the students meeting the deadlines for submitting the assignments. As shown in this paper, the project was divided into several stages, one logically followed by the other, and thus, it was of utmost importance to respect the deadlines. This is one more reason for insisting on tutorials. This way the students would be able to seek timely help from the teacher, agree on format and plan content of the presentation, correct mistakes, mitigate all uncertainties and doubts, solve problems, and interact with the teacher.

## *7. BENEFITS OF STUDENT PROJECTS*

Benefits for students

Learning is improved by increased ownership of the process / motivation is improved.
Language skills are honed.
Reflection on recently completed assignment / project is fostered.
Generic skills like team / pair working, communication, interpersonal and organisational skills are improved.
Collaboration rather than competition is fostered.
Student-centred learning is promoted. Peer assessment is a part of learning.
Assessment and learning are linked.
Understanding of what it takes to assess fairly and consistently is improved.

Benefits for teachers

Increased opportunity to monitor students' progress and identify problems like proper referencing.
Peer assessment is added to the standard set of methods. It is in line with the expected learning outcomes.
Clearly defined and developed assessment criteria and marking schemes.

What we can do differently next time

We have also reflected and capitalised on the project results. What we can do differently next time is the following:
Invest more time and effort into motivating students to build more positive attitude towards projects in general. Only then can they gain better understanding of the project, its purpose and their requirements, and, consequently, be more specific about their expectations from it.
Generate assessment criteria with students.

Work on the tutorial management.

Work on the prompt submission of assignments (expectations, project layout, project paper, reflective paper). The project has several steps, one logically follows the other, and it is of utmost importance to respect the deadlines.

Have a follow-up discussion on the benefits of peer assessment; explore the perception of students of the assessment process.

## *8. CONCLUSION*

We believe there are good reasons to involve students into projects, reflection and peer assessment. To avoid some of the problems like timely completion of assignments, a detailed project plan is needed (for example: in the form of student monthly planning sheet / project milestone) and an input into peer assessment. For further student projects several general points to keep in mind would be to set deadlines for handing in assignments, give clear guidance on the task and the marking criteria (clear criteria help all focus on the work done rather than personalities), allow students to help develop criteria, make sure the presentations are short enough for students to mark comfortably, and award marks for content and process. Allocating marks for sub-tasks (for example for review literature) assists in equity issues and will allow for the development of different levels of knowledge and skills amongst students.

The findings from our project indicate a generally positive perception of the model we had set up. It was effective in student acquiring new profession-related knowledge, improving language and other skills, gaining greater understanding of the process of learning and assessment. The project results strengthened our belief that through an active participation in the project and peer assessment, students take their responsibilities seriously, they develop ability to reflect on the process of learning and are able to transform the reflection into personal understanding and knowledge.

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## INTEGRACIJA REFLEKSIJE U STUDENTSKE PROJEKTE

**Ovaj se rad temelji na modelu studentskog projekta i rezultatima dobivenim njegovom primjenom u svrhu dokazivanja njegove učinkovitosti u integraciji refleksije u proces učenja jezika i dubljeg razumijevanja naučenog. Model istovremeno razvija sposobnost učenja općeg jezika i jezika struke, potiče studente na odgovoran pristup i timski rad, razvija svijest o učenju i refleksiji o vlastitim očekivanjima, njihovom ostvarenju i promišljanje o postignutom na kraju projekta. Studenti su se našli i u ulozi ocjenjivača; koristeći unaprijed pripremljene obrasce s detaljno razrađenim kriterijima procjenjivali su znanje svojih kolega. Svi navedeni elementi uključeni su s ciljem usklađivanja nastavnog programa s ishodima učenja i njihovom procjenom. Rezultat su završeni projekti, stečeno znanje, razvijene generičke i specifične kompetencije.**

*Ključne riječi: refleksivno učenje i podučavanje, jezične vještine, kompetencije*