

DUAL DIPLOMA PROGRAM BETWEEN TWO MARITIME INSTITUTES: A THREE-YEAR OVERVIEW

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ABSTRACT

In recent years, world maritime institutes have been investigating possible new models to come up with a better maritime educational system in the near future. Several programs have been proposed, including international educational agreements between two maritime institutes. The Dual Diploma Program between the Istanbul Technical University Maritime Faculty (ITUMF) and the State University of New York Maritime College (SUNYMC), which was established three years ago, is one of these programs. Our experience during the first three years shows that although the educational advantages are obvious, it comes with several problems that need to be resolved. These include but are not limited to social, personal and cultural problems related to students and academic/financial problems that arise from the educational agreement itself. In this study, we are summarizing some of these existing problems with proposed solutions. Possible future problems are also investigated.

I. INTRODUCTION

As requirements for a better world emerge and problems start to present themselves in more complicated ways in increasingly larger space and time scales, the interdependence in many areas including but not limited to economics, industry, ecology and politics, commonly referred to as “globalization”, becomes unavoidable. Under these circumstances, it is only intuitional to predict that the qualified people of tomorrow will

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have to be experts not only locally but also globally to be capable of performing under highly varying situations and locations. This implies being familiar with the state-of-the-art world knowledge but also with different cultures and consequently with different ways of thinking. Although these two can be acquired separately time-wise, it can be argued that since they are interconnected, a synoptic acquisition would be more productive and profitable. Assuming that a certain amount of maturity is required to consciously acquire this kind of interrelated education, high schools and higher education institutions have traditionally been the official bodies where this opportunity of so-called “globalization education” is given to students in the form of exchange programs at small scales such as agreements between two universities or at larger scales such as the Socrates-Erasmus program. However, the length of stay in these programs are short, usually only lasting one semester, and students usually do not benefit fully since most of their time is spent acclimatizing to their new environment and “self-adapting” to cultural and language differences instead of concentrating on “self-education”. To overcome these disadvantages of the exchange programs, a relatively new different format has emerged under the name of the “dual-diploma program” (or DDP). This consists of a longer stay (as much as 2 years) at a host institution away from a home institution and specified courses passed at the host institution will be accepted for credit towards the degree at the home institution and vice versa. This way, students from each institution are able to study academic degrees at both institutions following a specifically designed curriculum and graduate and get diplomas from both. Note that this arrangement does not extend the length of the studies and the cadets get two diplomas within the time frame of one. The overall goal remains the same: to enhance educational and cultural experiences of involved students and faculty.

In order to achieve the overall goal stated above, the State University of New York (SUNY) and several higher education institutions in Turkey have initiated a dual diploma program in 2003. Istanbul Technical University (ITU) was one of the first universities to take part in this organization and there are currently 9 programs within ITU which are being carried out as dual diploma programs with different SUNY campuses (Nasuf et al., 2007). Two of these programs, namely the Marine Engineering and the Maritime Transportation and Management Engineering, are being carried out between the SUNY Maritime College (or SUNYMC) and the Maritime Faculty at ITU (or ITUMF) (Cline & Sag, 2003a; Cline & Sag, 2003b). Although these programs can be classified as successful academically, there have been many predicted or unpredicted problems that arose during the actual implementation and operation. This paper will concentrate on the operations of these programs, rather than their history, and will try to summarize the encountered problems, also attempting viable solutions when possible for the benefit of the Maritime Education and Training (MET) community.

2. PROGRAM DESCRIPTION

The ITUMF/SUNYMC DDP's are both 5 years long with the first "preparatory" year at ITUMF reserved for the required non-credit STCW (or Standards of Training, Certification and Watchkeeping) certificate courses complemented by an orientation program. The students without the required language proficiency also take English classes, while attending the TOEFL exams. The fall semester of the second year, during which basic engineering and maritime English education are given, is also taught at ITUMF. The students have until the end of this semester to satisfy the language requirement. The cadets then head to SUNYMC around the end of December to attend the 1 week intensive Indoctrination program. A faculty liaison from ITUMF escorts the cadets at this point and stays with them for one semester to help with their adaptation but also to participate in teaching and research activities as a visiting scholar. Once they are successful, they start the SUNYMC portion of their studies, starting with the spring semester of the second year. The third year is fully spent at SUNYMC. During the summers of the second and third years, the cadets go onboard the SUNYMC's training vessel T/S Empire State VI to attend two 2-month-long Summer Sea Terms (or SST's). The cadets then return to ITUMF for the fall semester of the fourth year. After one semester at ITUMF, they go onboard national or international commercial vessels to get their 8-month-long Long Term Sea Training (LTST). The fifth year is spent entirely at ITUMF. Having satisfied the requirements of both institutions, the cadets receive two diplomas from both institutions at the end of their studies.

The total length of the exchange part of the program is 20 months, all of which is spent at SUNYMC. Although the program was formulated for reciprocal exchange, it has been a one-way exchange from ITUMF to SUNYMC until now, with ITUMF being the "home" and the SUNYMC being the "host" institutions. Each program is run by a so-called "program coordinator" who is responsible for all the operational (both academic and financial) aspects and who is directly responsible to the ITU Rectorate. The coordinator is also responsible to take the lead on issues such as class equivalencies, curriculum development and disciplinary actions and activate the necessary commissions. The coordinator works closely with the SUNY DDP central office in Ankara in issues such as visa interviews.

As of today, there are 60 students enrolled in the Maritime Transportation and Management Engineering Program. 43 of those are already in the undergraduate program while 17 are in the preparatory class. In the Marine Engineering Program, the total number of students is 40. 31 of these are in the undergraduate program while the rest is in the preparatory class. ITUMF gives full scholarships to one cadet from each program, while SUNYMC awards 2 scholarships for every 10 students with one earmarked as a merit scholarship for a female cadet. The programs will give their first graduates in the summer of 2008. It should also be noted here that a cadet who is dismissed from either

institution for academic or disciplinary reasons is dismissed from both institutions and dismissed from the DDP.

3. OPERATIONAL ISSUES

3.1. ACADEMIC

One major problem on the educational side turned out to be the situation of students who failed a large number of classes originally scheduled to be taken at SUNYMC. The questions related to this problem would be “how many credits can a student fail in one institution to be taken at the other institution”, or “what is the minimum number of failed credits above which the student should be sent back to the host institution”. Note that without such a limit, a student can theoretically go to SUNYMC, fail all the classes that he/she needs to take there and then return to ITUMF and ask all those classes to be opened at ITUMF. Although we set this minimum limit to 7 initially, we had to increase it to 12 since one needs to take at least 12 credits per semester to be considered a full-time student under the F-1 visa per the United States Citizenship and Immigration Services (USCIS) regulations. In other words, this means that if a cadet fails more than 12 credits at SUNYMC at the end of the SST 2 in the 3rd year, then he should go back there sometime before graduation to complete these credits. Note that this issue is made more complicated by course prerequisites. Also, it should be noted that international travel and transfer arrangements are necessary and that this brings a very important financial burden on the student’s part whenever he needs to travel back and forth between the home and host institutions. This proved to be an issue which is very hard to explain to students’ sponsors who did not want to pay any more than necessary. Thus it is extremely important that these issues have to be explained very clearly in the program documentations and the students/sponsors be warned beforehand.

Another major problem originates from a combination of incompatible academic calendars between the institutions and academic probation issues. The original dual-diploma program agreement between SUNYMC and ITUMF states that the GPA’s at both institutions are to be kept separate. This keeps an ITUMF student from increasing his cumulative GPA during his/her SUNYMC residence. It is also agreed that a student who is on probation at the home institution (a GPA of 1.9) cannot start his/her residence at the host institution. This original idea turned out to be inapplicable because although the cadets need to be sent to SUNYMC at the end of December to attend the Indoctrination, the grades from the finals at ITUMF are not available till after the 3rd week of January. This means that all of the students in the program, whether on probation or not, need to be issued visas and sent to SUNYMC at the end of December since the system does not know if a student is academically in good standing or not at

that time. What this does is that, a student who is in the probation list during his 3rd semester at ITUMF finds himself to be still on probation when he comes back to ITUMF in the beginning of the 4th year, whether or not he/se was successful at SUNYMC. This keeps him/her to take more than 12 credits a semester at ITUMF and combined with the Long Term Sea Training, creates all kinds of class scheduling programs, possibly extending the length of his/her studies. This rather unjust situation still continues and the agreement needs to be corrected. This and the problem explained in the previous paragraph prove that the dual diploma program is not tolerant to failure on student's part and it requires a considerable effort to rearrange the curriculum to incorporate each cadet's situation.

Another academic problem that we faced is related to the language of instruction. According to the initial agreement, all classes in the program, whether taught at SUNYMC or at ITUMF, were to be in English. This caused problems for cadets who failed a class at SUNYMC and wanted to take an equivalent summer school class from a Turkish higher education institution since the class was not always offered in English. This undesired situation was eliminated by mutual agreement between SUNYMC and ITUMF with the assumption that the acquisition of knowledge is more important than the language it is provided in, especially if the cadet has already proven his/her language skill through proficiency exams and during his/her SUNYMC residence. The students can now take the classes that they attend in Turkey in Turkish based on approval from both home and host institutions.

The program is also not free from common maritime education problems such as a high number of credit or non-credit courses that needs to be incorporated in the curriculum to meet various standards set forth by the STCW, ABET (Accreditation Board for Engineering and Technology) and ECTS (European Credit Transfer System). This includes the effect of the SST's and the LTST and the resulting difficulties in curriculum development while trying to fulfill the above mentioned requirements. To minimize related problems, curriculum development needs to be very carefully handled through close interaction of the responsible parties of the host and home institutions, both before the launching of the actual program and dynamically during the first 4 years of its operation. The course equivalencies and prerequisites should be very carefully defined. We found out that this is especially important during the second year when basic engineering classes such as Mathematics, Physics and Chemistry are given, since the advanced classes have all these basic classes as prerequisites. For instance, we have run into problems with Math I, which is taught at a higher level than SUNYMC at ITUMF during the fall semester of the second year, just before the cadets head for SUNYMC. The majority of students failed this class in Turkey but when they took the equivalent class at SUNYMC, they passed with good grades. A quick investigation of the cause of this incident showed that the ITUMF equivalent had advanced topics which did not really fit into the maritime curriculum. It is now being realigned to match its SUNYMC

parallel. Also, the students need to be warned that not failing the basic engineering classes during the first year of the program is extremely important in the sense that there is a high probability that they will not be able to complete the SUNYMC part of their studies in time if they do so because of scheduling and prerequisite problems.

Another problem specific to the maritime programs is that it is very hard to organize summer school sessions due to scheduling problems since the students need to attend summer sea terms (or SST's) to fulfill the STCW requirements. This becomes a problem in the case of students on probation lists since they have no opportunities to make up for failed classes other than attending them again during regular school semesters. ITUMF never opened summer school for the dual-diploma program students and it is unlikely that it will do so in the near future. However, it is possible for students to attend summer school at SUNYMC after the summer sea term terminates but the logistics are complicated and usually expensive due to overseas travel.

3.2. FINANCIAL

Presently, ITUMF has the responsibility of collecting the tuition and the fees for both institutions from the cadets. The amount estimated for the entire length of the studies (5 years) before the national university entrance examination (or OSS) is announced in the Turkish Higher Education Council's (or YOK) official guide for the programs each year. This amount includes preparatory year fees, which consists of the STCW courses and the English education, ITU tuition and the SUNYMC part, which includes tuition as well as regimental fees and SST fees. The latter is wired directly from the bank to US every semester once we receive the official bill from SUNYMC. An issue with this setup is that it requires individual based accounting and it is very hard to keep track of the amount each student owes to the system since there are many other factors that affect this calculation, such as drug fees, room damage fees and tech fees. This requires an incredible amount of bookkeeping on the program coordinator's part, especially considering that he/she does not have anyone assigned to help with the finances. We believe that finances should be kept separate and the cadet should pay to SUNYMC and ITUMF separately for what he/she owes to these institutions.

Another important issue with financial grounds here is that currently the DDP's are completely separate from the regular undergraduate programs on the ITU side. This means that the DDP students cannot sit in the same class as their regular ITUMF counterparts even if the course has full equivalency, and the reason for this has nothing to do with the academics. The rationale is that no fool-proof formula was found on the ITU side to financially justify the situation of having the same hourly-paid instructor giving the same education to paying and non-paying students in the same class. Practically, this means that it is possible to have two versions of the exact same class in the same semester, one for the DDP students and one for the regular ITUMF students. There is

also the possibility of having to open a class for only one or two irregular students, who failed that specific class at SUNYMC but left less than 12 credits and returned to ITUMF. This latter opens up another related discussion as to how the hourly-based salary of the course instructor can be extracted from one or two students taking the class. These issues currently have no viable solutions.

We would like to emphasize here that one of the most serious problems which endangers the future of the programs is the fact that according to the new YOK regulations, it is not possible to make any payments to the program coordinators, research assistants and the staff involved in the day to day operation of the programs (YOKD, 2006). The reader should note here that the above mentioned people are doing this work in addition to and not instead of their normal administrative and academic duties of teaching and research. This issue will negatively affect the program in which relatively high paying students or their sponsors are asking for privileged education. ITU is working with YOK and other higher education institutions involved in DDP's to solve this problem.

3.3. OTHER

Several other problems were faced, that act to amplify the effect of the more systematic problem subdivisions stated above. For instance, the first cohort of students who went to study at SUNYMC without getting the proper orientation in a yet to settle system faced psychological problems. Our belief is that this situation was mostly due to the fact that the amount of real and imaginary problems that they were facing was overwhelming to them. Coupled with the fact that they were in a foreign regimental system in a non-native country, this caused them to turn inwards and form a closed circle of "Turkish students" who did not involve in extracurricular activities or other cadets. A direct result of this was failed classes for the majority of the students. Several other problems related to this have also emerged resulting in disciplinary action, including out-of-regiment authority questioning between different cohorts and cheating incidents. This overall unwanted situation, which is against the unifying intercultural nature of the DDP, got eliminated starting with the second cohort, as a result of better orientation and better communication between the coordinators, the cadets and their advisors. The members of the second and third cohorts are now very active outside the classroom and among themselves. For instance, the second cohort distinguished themselves by receiving a record number of academic honors for their coursework. Twelve out of twenty students received academic honors at SUNYMC. Eleven of these were in the Dean's List (GPA > 3.0) and one was in the Admiral's List (GPA > 3.5). It is also important to note here that although the cadets spend their SUNYMC residence under a structured military style regimental program, their ITUMF residence is not as stringent. For instance, although the cadets have a uniform based campus life self-regulat-

ing under a strict discipline code, they are however free to choose between civilian on campus housing or going home after school hours. The authors believe that switching from the more relaxed ITUMF environment to a stricter one at SUNYMC without advance warning and proper orientation also helped in the creation of this problem for the first cohort.

The program is also very sensitive to changes in the national level university entrance examination procedures and how the scores are calculated. For instance, due to such a change in the 2006 entry exams, a student had to be at least 44,764th to be accepted to the Maritime Transportation and Management Engineering dual-diploma program, while in 2005, a ranking of 85,138 was enough. The same numbers are 70,433 and 99,045 for the Marine Engineering program respectively. To put these numbers in perspective, note that the minimum score for placement in an undergraduate program has been acquired by 987,963 candidates in 2005 out of 1,671,603 versus only 377,086 out of 1,510,302 in 2006. As a direct consequence of this and since the priority always goes to programs with less tuition, only 4 students have registered into each program. This number is way below the announced quota of 29 and it is clear that a sustainable program is impossible to achieve if the problem persists. However, this and similar situations are temporary and we believe that normal enrollment numbers will return once stability is reached.

Over the past three years, the majority of students have had hard time acquiring the required TOEFL score of 550 to start the program. Note that this score of 550 was not required by SUNYMC but by Istanbul Technical University's (ITU) old directive for DDP's (ITUD, 2003). Considering that SUNYMC's TOEFL score requirement was 535, this issue raised quite a bit of questions from the student's side as to why a Turkish university requires a higher TOEFL score than an American college. A new directive on the ITU side now allows the partners in the DDP's to set their own language requirements. SUNYMC and ITUMF have recently agreed that the absolute acceptance score should stay at 550, but that a conditional acceptance should be offered to students if they receive a score between 535 and 550. These students are accepted into the program but they remain in conditional status until they pass the English class offered at SUNYMC with a grade of C or better. Note that a student cannot graduate from the DDP while in conditional status.

We have noticed that promoting the programs is extremely important for recruiting students. The main reason for this is that the dual-diploma programs are considerably expensive than the regular ITUMF maritime programs and the potential candidates need to have a very clear idea of what more is offered and why they are paying the extra tuition to receive another diploma from another college to perform the same job. The promotion material need to concentrate on this issue and students need to be reminded of the advantages that they receive by enrolling in the program, such as the opportunity to work in well-respected worldwide companies with higher wages and better benefits,

acquiring a global point of view through intercultural relations and better language skills. Enough funds should be reserved to distribute the promotion material nationwide and to participate in student recruiting fairs throughout the country.

A minor operational problem comes from the fact that the regular ITUMF system is non-residential (implies non-regimental) but the DDP is, both at SUNYMC and ITUMF. The absence of residential facilities at the ITUMF campus has been partly solved by using our training ship M/V Akdeniz as a student hall in a static role. The ITUMF part of the program has been switched to non-residential in 2005; however we still have to provide this service until the cadets who entered the program before that date graduate. The fact that the regular students do not have access to any residential facilities like their DDP counterparts has also received some reaction. This, however, is something that is not directly related to the DDP and will not be mentioned here.

An important issue that created quite a bit of reaction, especially with the first cohort, was the fact that the initial program documentation mistakenly stated that the Turkish cadets graduating from the DDP would be able to sit for the United States Coast Guard (USCG) third officer license exam and receive it. This, however, is not possible due to USCG regulations which state that you have to be a US citizen to acquire this license. ITUMF students currently are not allowed to even sit for the USCG license exam. SUNYMC is presently seeking approval for the DDP, since these programs are two-way programs so a US student could complete the DDP and expect to sit for the license exam. Also STCW requirements are international and the ITUMF STCW courses are assessed using the same criteria as the SUNYMC courses. Additionally, the USCG now allows cadets to complete their cadet observer in lieu of SST onboard foreign flag vessels. (Hoffman, pers. comm. 2007)

4. CONCLUSION

The dual diploma programs in today's world offer another option of spreading the knowledge and culture in an educational setting. Almost-standard engineering and MET classes can be offered in any credible international MET institution but intercultural relations are harder to establish in a world where a global point of view becomes a necessity. The DDP's fill this gap by offering a long-term exchange during which the professionals of tomorrow extend their horizons by diving into a multicultural world and interact with their future colleagues who will be performing the same job in the same global environment. This multi-faceted education also brings them top offers from world-renown companies, while establishing exemplary and highly intellectual working relationships between academic institutions, also leading to other cooperation such as faculty exchange and cooperative research.

Even though the advantages of the DDP's are obvious, they come with a number of challenges, some of which are explained in this paper based on our own experiences.

It seems that the best suggestion we can provide would be to start small and grow with the program since there will be quite a bit of “learn as you go” during the process. We also can not emphasize enough the importance of intra and inter-institutional flexibility and goodwill since the programs require some kind of autonomy and independence. As far as students are concerned, it is observed that most of their issues can be solved by effective and advance orientation, counseling and advisor availability. The financial restrictions that keep the coordinators and staff working on the day to day operation of the program from getting paid should also be eliminated as the programs require considerable time and effort to run.

Although this paper concentrated mostly on problematic issues to guide in the creation of future programs of the same nature, it should be noted that the program is very successful overall. Cooperation in graduate studies and possibilities of cooperative research are being investigated. We are also investigating possibilities of having SUNYMC cadets at ITUMF but due to US licensing procedures, only intern-option students such as the ones in the Naval Architecture program, may do so for summer programs. We are also planning on having SUNYMC faculty at ITUMF for teaching curriculum elective classes for one semester. To conclude, we highly recommend creation and continuation of such culturally and academically enriching programs as the advantages for the students and institutions far outweigh the difficulties encountered in the operation.

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