Rapporteur summary for the first panel by Prof. Linda Ziberi, PhD

Professor Muhamed Behi from the New Jersey Institute of Technology shared his experience from the Mechanical and Industrial Engineering field and the role that new technologies such as 3D printing play in research. In the questions and answer session we addressed the issue of student autonomy and Professor Behi made a good point on the importance of giving students freedom during the research process by addressing some of his experiences from his beginnings.

Prof. Ahmad Zargari from Morehead State University talked about how the participation of undergraduate students in research helps them become more engaged in the education process and provides them with life learning skills. The program at Morehead University is something that we can apply here at RIT K in order to involve students in the research process in a more formal way. I think this program will serve both the faculty and the students well, and it can also be good for promoting our university locally and regionally, especially if we start involving students in conferences and other more formal research activities. Of course, prof. Zargari was mostly addressing research in more technical fields such as engineering which is his field, but I think this can be applied in all fields. He also gave some really interesting ideas on making sure that the students have the freedom to choose research topics that do not necessarily correlate with the interests or field of the professors in a certain institution. The idea that you can engage faculty from other institutions to assist students pursue research in areas that they are passionate about.

Prof. James Hall presented a very innovative program at the School of Individualized Studies at RIT New York, and the most interesting aspect of this program was the autonomy that the undergraduate students had in doing research. We saw a lab completely run by students who were using most recent technology to conduct research. Prof. Hall also addressed some concerns regarding faculty coverage with such autonomous research practices and he mentioned that a combination of structure and autonomy are key to producing success with such practices. Some of the benefits that the students gain from such programs include: learning to develop strong proposal process, knowledge of disciplinary conventions, experience in presentations, and emphasis on revision (as prof. Hall said the students learn early on that no one gets it right the first time). The students also learn how to distribute research results; however, they focus on differentiating between a failed project and in progress professionalism (meeting deadlines and exhibiting professionalism) which is the most important part as he said. Prof. Hall said that research most of the time fails, therefore we need to make students aware of the process, and that the success of the research project is not crucial. Toward the end of the presentation he also mentioned the importance of investing in marginalized students and making sure that we celebrate success of all kinds. He talked about encouraging institutions to not pursue the status quo, but apply new modes that are emerging all around the world and experimenting with new ideas.

Rapporteur summary for the second panel by Prof. Besnik Bislimi, PhD

Dear participants,

It is my pleasure to summarize some key findings or conclusions from these two excellent panels. First, I would want to thank each of the panelists for their valuable contribution and insights about the role and relevance of including research in our undergraduate programs.

We heard from Professor Hall and I believe we all agree that research is a permanent process and goes far beyond a semester limit that our students usually face. It derives from the process of creative destruction, where the birth of new and more advanced products creates new markets and destroys old ones. Research leads to not only new ideas and/or new products; it also helps us find new ways or technologies for producing existing products.

Students involved in research, especially those in engineering should be aware that only few of them might succeed. However, the main goal of research inclusion in undergraduate studies is the very process of doing research, not necessary its outcome.
Another focus of our panelists was on the main two elements that determine the success of research in undergraduate programs; its fertility through active involvement and synergy (the relevance of networking was mentioned several times), and the appropriability of its benefits through patents and publications. And it was noted that research integration is a win-win situation for both graduates and the institution (including its faculty).

Panelists emphasized the clear positive relationship between student involvement in research during the undergrad studies and three important elements: probability of pursuing graduate studies; timely graduation; and positive ex post feedback on the satisfaction with the undergraduate studies.
As RITK one lesson learned from this conference is the need to completely rethink the role and utilization of our work studies and the academic support center. Work-studies would be best utilized if involved in research and not necessary as support for existing staff responsibilities. And the Academic support center needs to look for ways in focusing more on the bottom quartile.

We were able to conclude for our panelists that there are several approaches as how to integrate research in the undergraduate studies. One recommendation was to adopt and adjust the RIT main campus approach.

We saw that research does not have to lead always to new products. Actually, the experience shows that most of the publications come from social sciences. However for social sciences a more aggressive enrollment in writing (and critical thinking) courses was recommended.
Panelists also discussed the limitations that result from relatively high class-sizes, which are negatively correlated to the success of research initiatives.

The relevance of sufficient funding for successful integration of research, especially in the initial implementation phase was mentioned as a potential limitation for small and tuition driven institutions such as RITK.

So thank you again to all participants for this two excellent sessions and of course many thanks also to Mimoza Polloshka, the head of the Faculty Development Center for organizing it.