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1. Introduction

The importance of engaging students in research-based opportunities within and outside the classroom has been extensively studied. It is thus very interesting to find strong convergence as to the types of students' gains reported by diverse studies (Brown & McCarteny, 1998; Hunter, Laursen & Seymour, 2007; Lopatto, 2009).

Healey (2005), for instance, stresses that the involvement of undergraduate students in research activities helps them to develop several competences in a holistic, integrated and in-depth manner. Consequently, research-based contexts allow the students to improve and/or enhance personal, interpersonal, scientific and academic, cognitive, and so many other competences of transferable nature, which will be extremely important for their future professional careers within and outside Academia.

Also Brew (2010) mentions that the holistic development of competences helps the students to cope with the complexity and uncertainties generated by the advances of science, and with today's uncertainty (Barnett, 2000). Additionally, other studies report effects of these experiences on retention, persistence, and promotion of science career pathways not only for regular students, but also for underrepresented groups (Nagda *et al.*, 1998).

But, as it has been internationally noted, developing research activities and engaging students in a research environment at undergraduate level also impacts on leading academics/supervisors' performance, particularly in terms of the enhancement of mentoring and teaching; the achievement of research, scholarly and creative outcomes; the integration of scholarship and teaching; and the increase of job satisfaction and personal development (Osborn & Karukstis, 2009).

Moreover, the previous authors shed light on the benefits for Higher Education (HE) institutions. Undergraduate research activities have the potential of nurturing the creation of a community of scholars; deepening the relationships with Alumni; fostering innovation and cross-talk; reinforcing "*institutional progress*" (p.7); and enriching the institution's curriculum (Osborn & Karukstis, 2009).

Even though this seems a very well researched area, there is still a strong need for more research and systematised thoughts and reflections on the benefits of undergraduate research activities for academics and HE institutions. While simultaneously reinforcing the impacts on students' experiences while at HE and afterwards, it is important to better understand the effects it has on academics' research and teaching practices, and on institutional ethos and environment.

2. Description of the context of the study and methodological scope

Queen Mary University of London (QMUL) funded a pilot programme - *QResearchers* - to involve undergraduate students directly in academic research across the disciplines. There are eight research projects to be completed within the academic year 2014-2015, all of them outside of the regular curriculum. The goal is to raise students' potential interest in postgraduate study, to develop/enhance disciplinary-specific and also transferable skills, to enrich the students' overall

experience of HE, and to increase their employability skills. The Learning Development team at QMUL has designed and is still running the evaluation and monitoring process of the QResearchers project, with a view to clarifying its outcomes and benefits, and making recommendations for continued institutional support and embedding.

The evaluation and monitoring process is of exploratory nature, and it has two formal data collection points. In the beginning of each research project a questionnaire was directed to both students and academics. The questionnaires were similar in form and content, and were constituted by open answer questions, asking for participants' motivations and expectations. At the end of the research project academics' reports were analysed and students were interviewed. Academics' reports were compulsory and had specific pre-identified topics/layout. Students' interviews were designed according to the same topics academics approach in their reports, in order to compare and bring together these two perspectives. Additionally, both academics and students had to complete three surveys on students' gains, supervisory process and conceptions of research, which complemented the qualitative data.

In this presentation however, we aim to focus on data collected through academics' reports (N=5) and students' semi-structured interviews (N=12). Specifically, our objective is to systematise both undergraduate students and academics' perspectives on the perceived benefits of the research experience for (i) the development of students' competences, (ii) leading academics' teaching practices and research activities, as well as (iii) the HE institution (QMUL).

3. Preliminary findings

We will be presenting preliminary findings, since at the moment (end of June 2015) the final moment of data collection is still being carried out. One of the funded QResearchers Project is taking place during the summer and therefore, the data collection will only be finished by early August. However, we anticipate that preliminary findings already show trends emerging from academics and students' voices.

Also, it is interesting to notice that academics wrote very brief statements in their reports: in practice, they only wrote a couple of sentences on each topic. Through students' interviews we collected in-depth data: this was a more enriching way of gathering (and exploring) perspectives. Although reports' layouts and interviews' schedules mirrored in terms of topics, the 'quality' of the data is different. Consequently, the majority of the findings is based on students' voices.

3.1. Perceived benefits for undergraduate students

We may conclude that the research experience was important for students to develop several interconnected competences of different but transferable nature:

- Intrapersonal competences are related to personal features, which will have consequences for social and academic 'performances'. Students stress (i) increased self-confidence; (ii) the enhancement of resilience; (iii) the improvement of their autonomy/independence; (iv) the clarification of the career they want to follow – this was also spotted by two academics; (v) the enhancement of time management, organisation and prioritisation – these were also particularly mentioned by academics; and (vi) increased openness to different perspectives/points of view.
- Interpersonal competences focus on communication skills and relation with others. Students highlight the development of communication skills in general, but presentation skills (to several types

of audiences) in particular, and team working. This was the main emphasis of academics' voices on students' gains.

- Academic competences involve cognitive and intellectual characteristics. Students mention the development of technical skills and disciplinary-based knowledge – also extremely underlined by academics in their reports; increased self-awareness of the importance of research to make informed-based decisions learning and professional contexts within and outside HE – identified by two academics too; and the enhancement of critical thinking, problem solving, and search for information in an efficient way.

3.2. Perceived benefits for academics

Students consider that the QResearchers Project does not have any particular consequences on academics' teaching practice, because they see them as already very experienced. But, somewhat unsure, students point out that academics may (i) become more aware of the way students learn, perceive tasks and previous knowledge they already possess, and thus (ii) be concerned in identifying students' weaknesses and strengths, so they can adjust practices and content. But mainly, students think academics may better articulate and communicate contents in a clearer way.

Simultaneously, academics do not consider this experience impacts on their own teaching practices, except for two academics: one referred the possible enhancement of leadership skills inside the classroom, and other highlighted the awareness of students' previous knowledge and the ways they learn.

In terms of the benefits for academics' research, all students think that the projects fell under the research carried out by academics. Therefore, the projects they were involved in, although small in scope, help academics to expand their work. The same idea was recognised by academics.

3.3. Perceived benefits for the HE institution

From students' interviews we gather intertwined perspectives. The duty of a HE institution is to invest in a 'quality' preparation of the students, who should go through experiences that will be distinctive in the labour market. They consider research important everywhere and, thus, should be accessible to (all) students, because this is seen as an opportunity for personal, social, professional, academic development. Consequently, having been involved in research projects not only enhances their overall experience in HE, but also enhances their CVs and how they present themselves to the labour market. Therefore, on the one hand a HE institution is not only preparing the future generation of researcher – thus, developing reputation within institutional 'walls' – but is also putting the name of the institution in the spotlight outside its 'walls', when employers recognise the value of experiences that Alumna had at a particular HE institution.

Interestingly, academics seemed not to be so 'sharp' regarding the benefits for the institution or institutional ethos. They emphasise that the QResearchers Project enhances students' experience in HE, which may impact on their future career prospects/employability, and it is a way to bring undergraduates and academics together under a common purpose.

4. Final reflections

From preliminary findings we may state that undergraduate research projects are extremely relevant, since they have impact on students' holistic growth/learning, and on their path towards the development of a "*scientific mindset*" (Pearson *et al.*, 2009).

As Lopatto (2009) emphasises, research and teaching are “two forms of creative work” and particularly “undergraduate research mentoring may be viewed as the “the purest form of teaching” with benefits to the mentor as a researcher and as developing teacher” (p.12). Nevertheless, this did not emerge so explicitly from the data. Thus, it needs to be more explored in the future.

Therefore, a provocative question emerges, which must be discussed with the audience:

- To what extent do research experiences at undergraduate level (i) help to develop/shape students’ “scientific mindset”, AND MAINLY (ii) help to develop/shape academics’ profiles as teachers and researchers, and (iii) impact on HE institutions’ reputation, ethos and environment?

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