

Extramural but not Extracurricular: Revealing Hidden Learning through the Personal Development Portfolio (PDP) in Architectural Education

SIMON BEESON

Arts University Bournemouth

KEYWORDS

extramural, motivation, collaboration, entrepreneurship, employability

This paper considers the introduction of a Personal Development Portfolio into our assessment for architectural education. When revising our undergraduate course structure we moved to a fully integrated model, where assessment was based on a portfolio or 'body of work' produced during a ten-week studio project. These projects introduce, develop and integrate understanding and ability of the key knowledge and skills of the curriculum; design, communication, realisation (technology) and contextual studies. Each year of study also includes one unit where professional knowledge is also assessed. Alongside these 'learning outcomes' we introduced a PDP: a separate report documenting and reflecting on everything that falls outside the predicted aims of the project.



“You have brains in your head.
You have feet in your shoes.
You can steer yourself
any direction you choose.”
(Dr Seuss 1997 np)

INTRODUCTION: ARCHITECTURE AT AUB

Students learn in the strangest ways and architectural education is not simply a training in methodologies and techniques, but should, I believe, embrace the full range of student experience in learning about architecture, the wider world, and themselves. In 2012 Arts University Bournemouth introduced the Personal Development Portfolio (PDP) as an assessed *portfolio* component of the architecture curriculum, with the aim of encouraging and evidencing student engagement and active pursuit of their own learning, ‘embedded’ in the curriculum (Gray et al, 2006, p20). The PDP activity, while additional to the core studio projects, is *not* additional to the curriculum, but an expression of a learning methodology. It might be argued that to assess this extra-mural work is an unnecessary ‘commodification’ of student engagement, but I would argue the opposite; that assessment is the currency of student achievement and that the value the educational institution places on extra-mural activity is an antidote to grade-conscious methods of education, opening up such assessment beyond narrow ‘regulated’ activity. This is perhaps particularly true in architectural education, where the content of our curriculum has to meet multiple levels of professional regulation. Our students are very grade-conscious and our role as educators must, in part, be to liberate them from anxieties of failure and risk-averse tendencies by being inclusive of diverse educational experiences. In guiding students away from grade-consciousness and towards life-long learning we should value the breadth and depth of *ad hoc*, spontaneous and opportunistic curiosity. Although there is a body of evidence for using the PDP in higher education, the application in architectural education, and in the broader creative arts, is rarer. While other course may or may not engage in *Personal or Professional Development Planning* (PDP), BA(Hons) Architecture is unique in the assessment of this component throughout the course. This paper discusses the strategy for embedding the PDP in an integrated curriculum, the learning opportunities offered by the PDP and the student experience.

AN INTEGRATED CURRICULUM

“Is a school a place, an institution, a set of facilities, a situation, a circumstance, an attitude, or a constellation of relationships for the transfer of acquired, invented, and accumulated knowledge, experience, and insight from one generation to another? Perhaps a school or the idea of a school as a condition of learning, of being open to discourse and discovery, can also be seen as something that we might carry with us wherever we go, whatever we do.” Raqs Media Collective (Madoff 2009, p74)

In 2007 Arts University Bournemouth, launched an undergraduate architecture course, written in a traditional structure of parallel units of studies in design, technology, and contextual knowledge. This course was Part 1 prescribed by the Architects Registration Board (ARB; the UK competent authority) and Validated by the Royal Institute of British Architects (RIBA). It was also written to comply with the Subject Benchmark for Architecture established by the UK Quality Assurance Agency for Higher Education (QAA). In 2010 the ARB and RIBA approved new graduate criteria and graduate attributes for UK architecture courses, that were also embedded in a revised QAA Subject Benchmark. These are derived primarily from the 11 points of the EU Directive 2005/36/EC on the Mutual Recognition of Professional Qualifications (EU 2005, article 46 1a-k, p47–48), but adds ‘sub-points’ and additional graduate attributes to differentiate between the ARB/RIBA Part 1 (three year undergraduate) and Part 2 (two year postgraduate). The six new Part 1 attributes (GA1.1–6) identify the level of achievement expected for undergraduate students after three years of study. The first five deal with architectural competencies: design, communication, technology, contextual studies and professional practice. However, the sixth attribute derives mostly from the QAA and common educational objectives of all BA degrees, while reflecting some of the professional development skills required in the graduate criteria.

“GA1 With regard to meeting the eleven General Criteria at parts 1 and 2 above, the part 1 will be awarded to students who have: (...)

GA1.6 ability to identify individual learning needs and understand the personal responsibility required for further professional education.

(ARB 2010/2019, p7. QAA 2010, p9–10. RIBA 2010, p62)”

In 2011 AUB required a five-year Periodic Review, and the opportunity was taken to re-structure the course to the new Criteria and Attributes, to be applied from academic year

2012–13. The new six attributes were taken as an opportunity to create a more integrated curriculum. With a small course and subsequently a small course teaching team, this assessment had become an increasing burden. Revisions would also address the heavy assessment load.

The first of the eleven points, “Ability to create architectural designs that satisfy both aesthetic and technical requirements”, expresses the problem by bifurcating design between aesthetics and technique, *poesis* and *techne*, brought together in practice, *praxis*. The traditional model of studio education expects integration to happen in the design studio, where the skills and knowledge of various lecture courses are applied, but not necessarily explicitly assessed. In the re-write there was an opportunity to integrate the knowledge in each unit by assessing the different attributes against a single design objective. In effect, the graduate attributes became the assessed learning outcomes. In a sequence of 40 credit/20 ECTS (10 week) projects four of the first five attributes would be assessed. These learning outcomes could be written progressively to constructive accumulation skills and knowledge. The re-write of the course had many advantages: level 4 (first year) units were reduced from eight units to just three 40 credit units, level 5 (second year) from five units to three 40 credit units; Level 6 (third year) similarly changed to a 20, 40 and 60 credit structure (held in common across many of the AUB degree final years).

RE-WRITE OF COURSE TO ATTRIBUTES

Having considered how the first five attributes might be integrated in studio projects via progressive learning outcomes, the sixth attribute posed something of a challenge and included general study skills that progress towards professionalism. These are the soft skills, often considered implicit in studio practice. As a creative arts institution we also give our students opportunities to collaborate, respond to external briefs or in other ways adapt their skills and knowledge to applications beyond the anticipated scope of a pre-conceived integrated studio project. Additionally, we identified an increasing problem of course engagement and student attendance. The reasons for student absence are many and various, and beyond the scope of this paper, but it was noticed that high engagement in study was perhaps the most influential variable on student achievement. The AUB prides itself on high employability rates and our graduate employers’ value ‘soft skills’ just as much as academic and design achievement. Several employers have remarked that enthusiasm, initiative and collaboration were



Fig. 1: Engaging with architectural education (Berlin 2019)

the three most valued attributes for graduates. This is hardly surprising when considering that most of our students will go directly from the degree into a year of professional work experience between Part 1 and Part 2 as the junior members of a design team. Employers want to appoint students who will join small, hard-working collaborative teams. And for graduates who pursue roles outside of conventional architectural practice, soft-skills are also essential.

It was decided to map GA1.6 to all activity outside the studio project, a fifth learning outcome in every unit. In assessment term this meant 80% integrated design studio and 20% “extra mural” activity. It should be stressed that none of the *extra-mural* activity is *extra-curricular*; the inclusive learning outcome captures experiences that enhance the students’ architectural education. All learning outcomes are evidence assessed, usually meaning a report documenting learning activity, include all appropriate evidence, often in A3 format although usually submitted as a digital PDF. As the student progresses, the evidence can vary to include multiple reports that document different individual and collaborative activity. Every 10 weeks, alongside the integrated studio project, each student submits evidence of their ‘extra’ activity.

PERSONAL DEVELOPMENT PORTFOLIO

The architecture PDP borrows from applications of Personal or Professional Development *Plans* suggested by Advance HE, the UK’s national network for teaching and learning in Higher Education (previously known as the Higher Education Academy). This notion arose from the ‘progress file’ suggested in

The Dearing Report (1997), “a means by which students can monitor, build and reflect upon their personal development” (Dearing 1997, p139–141, p372), with these aims:

- to make the outcomes and value of student learning more explicit, and
- to support the principles of lifelong learning.

(Kumar 2005)

These ideas are also expressed in the “level descriptors’ indicated by the QAA and common to all degree qualifications in the UK (QAA 2014). Included in all degrees are certain transferable skills necessary for employment:

- the exercise of initiative and personal responsibility
- decision-making in complex and unpredictable contexts
- the learning ability needed to undertake appropriate further training of a professional or equivalent nature.

(from the FHEQ Level 6 descriptor, QAA 2014, p 26)

The PDP may be described as students “learning to learn” (Allan 2003 np). While much research on architectural education concentrates on studio teaching (for instance Schön 1983), other student activity is less likely to be addressed. This is perhaps because of the vocational nature of study and the formal professional regulation of employment, such as the Professional Education Development Record (PEDR) required in the UK. However, I argue that the PDP is an excellent route into understanding the value of the PEDR (completed while in employment training) and the later role of Continual Professional Development (CPD) required of qualified architects by the ARB and RIBA. As has been observed, the Personal Development Planning allows students to reflect on learning, understand formative learning, expands learning beyond perceived boundaries of subject knowledge, and engages student motivation (Gray et al, 2006, p13).

There is no requirement for assessment as such in the notion of a learning report or progress file. However, we do have a requirement to define how all professional graduate criteria and attributes are ‘evidenced’. By adding a 20% PDP component we express the educational value of this submission, while ensuring all students participate in any required content and are encouraged to initiate their own contributions.

Perhaps more challenging is not whether PDP is assessed, but by what criteria it should be valued. Evidencing requires not

just participation and engagement in ‘extra-mural’ activity, but professional presentation, personal reflection, demonstrable initiative, curiosity, and risk taking, as well as the application of core and soft skills in communication, collaboration and professionalism. It is also predictable that any ‘open curriculum’ must address the issue of parity. Therefore, any pass standard should be based on a minimum acceptable participation, primarily in course opportunities offered to all students, while higher achievement might reasonably be based on individual initiative. This does not seem unreasonable, as the course structure is explicitly designed to support enthusiasm and initiative to improve all achievement. The ‘extra’ activity enhances skills that will be deployed and enhanced in the integrated ‘project’, and *visa-versa*. The PDP is an integrated element of learning, described in our Course Handbook as an ‘enrichment’ of the curriculum:

- The term **enrichment** is used to describe complimentary **enhancement activity** that you will undertake during your studies.
- They can occur within **all units** (except the Final Comprehensive project).
- They are assessed as part of the unit within **existing learning outcomes** (LO5).
- Learning outcomes include **sensitivity to enrichment activity**.

(AUB 2018, p16-17)

These first points define the common characteristic to all PDP activity. The second point applies because parallel to the Final Comprehensive Project (FCP) is the Professional Studies unit, and the PDP is required only in that unit. The third point identifies that the PDP is integrated into the unit assessment and must therefore be submitted with all other elements for that unit and passed, in accordance with university regulations. The fourth point of ‘sensitivity’ provides that any evidence submitted by the student in addition to studio project work can be assessed as evidence of enrichment activity. This allows students to ‘blend’ their enhancement experience and projects; the PDP may include work that either ‘spun off’ from the project (such as exhibitions, public presentations, wider collaborations) or project enhancements based on enrichment activity (additional skills or research that has coincidentally contributed to a project but was neither required or anticipated as part of the projects assessment). In other words, when a student

includes irrelevant work in the project reports it may be considered as enrichment activity, or, more likely, a student may apply and integrate skills and knowledge developed as enrichment activity in a project. Our attempt is to encourage individual enthusiasm and initiate, and 'capture' any relevant learning in the LO5 if it cannot be assessed elsewhere. In the first unit of second and third year students are allowed to include any relevant enrichment activity undertaken since the completion of the previous year. This will be unique to each student and is an encouragement to make the most of the long summer break.

Ten further points outline the type of activity anticipated in the PDP:

- Enrichment can include any element delivered to **enhance the curriculum**, examples would including visits, overseas trips, guest lectures, special workshops, lecture series (some shared with outer courses), collaborative projects/workshops, inductions, external events, conferences, community/voluntary engagement.
- Some enrichments are **established parts of study**, such as HIDE (a collaboration with BA (Hons) Fine Art at Level 4), FAT (a collaboration with BA (Hons) Textiles and Fashion in Level 5), or the Friday @ Noon whole course lectures.
- Enrichments can be developed/evolved as **recurring collaborations** between courses or across levels.
- Enrichments may occur once, on an **ad hoc** basis, to enhance student experience.
- Enrichments may be **optional** (e.g.: Venice Biennale), but the course will monitor and facilitate parity between student experiences where possible.
- Enrichment activity may be **student-initiated** (either individually or in groups), staff-initiated, or externally (by invitation).
- Enrichments can be of many different types, such as the **Swiss cheese** perforation in the timetable allowing others to collaborate or **chocolate chip** opportunities (such as guest lectures/workshops), or **windows** into other worlds.
- Enrichment is an inclusive opportunity to allow **adaptability and flexibility** within the curriculum, made possible by the reduction of assessment points and the inclusiveness of some learning outcomes. They remove the perception of a straight-jacket curriculum and enable a **responsive**, enhanced curriculum to evolve within whatever resource (time, people, materials, equipment) is available.

This list is not exhaustive, but a starting point. In summary, activity in the PDP is likely to include opportunities offered and required by the course by all students in any of the units of study (including lectures, trips, collaborations), optional activity offered by the course (one-off or repeated participation by individual or limited numbers of students in *ad hoc* opportunities, either institutional or external), and activities initiated or participated in by students judged to be of value in their educational experience (including travel, visits, work experience, collaborations, or other creative practice, including sketchbooks). The three metaphors suggested are; the 'swiss cheese' or perforated curriculum, providing timetabled opportunities outside of the procedural project activity (including collaboration days or weeks set aside in the timetable for enhancement and short projects); 'chocolate chip' enrichments that enrich the curriculum either initiated by the course (such as guest lectures), student or group of students (including interdisciplinary working beyond project requirements); the 'window', opening the student experience to external 'fresh air' (including work experience).

AUB Architecture has now been applying the PDP for seven years. It has become an increasingly important element of our educational offer and student experience.

PDP IN ACTION

It has been argued above that there is value in the introduction of a Personal Development Portfolio in architectural education. To evaluate whether this is so, let us consider some of the activity submitted and indeed afforded by the inclusion of enhancement activity in the course curriculum. After the first year the PDP requirement includes a specific reflective comment at the end of each entry, making more explicit the perceived value to the student.

Guest Lectures: we hold regular guest lectures, every Friday at noon, open to all students of architecture across the five years of study, as well as staff and the wider AUB community. These talks can include prestigious architects, local practices, emerging practices, artist from other disciplines or graduates. These lectures also broaden the curriculum by bringing diverse voices and specialist knowledge to the attention of students. As with all such lectures, the value is partly in their unpredictable content: you never know where or when inspiring ideas might emerge from. Speakers present their own inspiration and methodologies, including unique methods of representation. Once a year we also host the RIBA Dorset annual lecture on Thursday evening in November. This is also open to local practitioners.



Fig. 2: Artist Aeneas Wilder leading a stick building workshop (2015)



Fig. 3: Field Trip Collaboration between architecture and fine art students (2018)

Students are expected to document these lectures in the PDP. Some use this opportunity to further research and respond to the lecture. Often lectures are followed by seminars, or in the case on artist Aeneas Wilder, a stick building workshop (fig 2. See also Beeson 2016).

Collaborations: we value collaboration between students. Over the years we have experimented with various ideas. In the first year we have a three-day collaboration with Textiles students. Small groups of students from each course engage with an open brief to explore the challenge of working together and share skills and experience. A collaboration with Fine Art students, “Field Work”, asks groups to respond to assigned themes

in the context of either the campus or an off-site location (fig 3), sometimes making direct interventions in a found site. Submission for the PDP usually includes a single document created by the group and submitted by each participating student. It is worth quoting student comments from the National Student Survey, an anonymised survey of all UK students in the third year of study. Students have an opportunity to make comments that are then returned to the institution along with statistical feedback.

“The opportunity for cross course collaboration at Arts University Bournemouth makes it unique and encourages students to work with students outside their course and learn new skills from this and apply to our own course.” (NSS 2019)

The AUB also organise cross course collaborations with live briefs. These AUB 24 collaborations are set one day and presented the next. They are not architectural but more general design challenges, where the students volunteer to participate. However, the architectural student brings a particular place-based spatial thinking and different representational skills to the group and students value these opportunities. As one student observed:

“Collaboration between different courses stimulated my creativity and brought further depth to personal projects as well as creating new connections with [students] outside my course.” (NSS 2018)

Visits: As with most courses we arrange trips to buildings and exhibitions. While sometimes these are specifically for a project, they are often of more broad value. The first year begins with our annual visit to the Serpentine Gallery Pavilion, London, designed each year by a different architect. The opportunity of a London visit also includes a visit to the Victoria and Albert Museum (V&A), home of a permanent architecture gallery. The visit sometimes coincides with special installations at the V&A for London Design Week. If possible, we will visit an architectural exhibition, such as the Renzo Piano exhibit at the Royal Academy in 2018. Other trips happen as and when the opportunity arises, whether to London or a regional gallery.

Every year a European city is visited, open to first- and second-year students, and usually for specific building visits. For instance, in 2019 we visited Berlin and took the opportunity to visit Dessau on the occasion of the Bauhaus Centenary. Other cities include Barcelona, Paris, Amsterdam and Rome. For younger students, these visits introduce significant



Fig. 4: Venice Biennale Photography Book by third year student Deniz Sayar (2018).

architectural experiences and engender the architectural love for travel. In Venice Biennale years, students are encouraged to visit during the summer break and document in their PDP (fig 4).

Students on study exchange have also been able to enhance their submission by reporting back on the unique opportunities they found while away, in addition to their design projects. In 2017, a visiting professor from China facilitated an exchange of four students to collaborate on a rural regeneration project. The course is open to all sorts of appropriate opportunities. As one student commented:

“The ability to collaborate with other courses has been very worthwhile. I have made valuable contacts from other courses and learnt different ways of thinking. Also, my course has given us lots of opportunities outside of the university and even outside of the country which has been very enriching.” (NSS 2018)

Skills: The PDP also allows us to broaden the curriculum into optional activity. Dr Willem de Bruijn leads print making and book binding workshops, derived from his own research and interests. Students experiment with screen printing onto different materials, such as local Portland stone. Often final reports in third year are beautifully bound (fig. 5). In addition to these opportunities, we accept sketchbooks, life drawing (from AUB events), films or animations as part of the PDP portfolio.

Events: Perhaps the most interesting opportunities evidenced in the PDP are the ad hoc invitations to contribute to



Fig. 5: Korean Exchange, Hongik University, PDP by Third Year student Sammie Pitter (2018)



Fig. 6: Layers of Bournemouth by Bryony Marshall, 2018, commission for BEAF with technical assistance from AUB Architecture students.

local architectural and arts events. In 2018 students helped artist Bryony Marshall complete a rammed earth sculpture, building the form work in our workshop and assisting the making, led by a student who had researched earth building (fig 6). This was part of the Bournemouth Emerging Artists Festival (BEAF). For BEAF 2019 another group constructed an exhibition of proposals for a temporary gallery. In 2020 students will volunteer to turn a department store into a pop-up gallery and theatre for BEAF. These projects offer valuable live-project experience



Fig. 7: First year students assembling the Pop-Up Museum at the Russell-Cotes Museum and Art Gallery, Bournemouth (February 2019).

with real clients. The courses' role is to triangulate between client, students, and institution, ensuring any health and safety issues are considered and providing logistical support. In 2019 we also created a pop-up exhibition at the Russell-Cotes Museum in Bournemouth, made by a group of first year students, including work by a wider group of student contributors, and using a student design exhibition system (fig. 7). We also have an ongoing relationship with the town of Poole and set our second-year projects there. This has included annual exhibitions in The Lighthouse Arts Centre and workshop events on planning ideas for the town, all additional to the main project and engaged in by either all students or volunteers.

Student-initiated opportunities: These represent the very highest level of engagement in the student's own education and personal development. Examples include collaborations with other students, such as the student who designed and built a set for a photographer student to photograph the collection of a fashion student. Another student spent a day making bricks in a Copenhagen factory. As demonstrations of motivation, curiosity, creativity and education these are the kind of activity traditional course might fail to capture.

CHALLENGES AND OPPORTUNITIES

Perhaps the greatest challenge educationally is to ensure parity of opportunity between all students. For this reason some opportunities are required PDP content from all students (such as the guest lectures) and we are careful to offer some

opportunities to all students. If students do not take the European trip we ask for alternative building or exhibition visits closer to home. Another example where parity is difficult is in work experience. One student spent some time on a holiday in Australia, including architectural visits, but also documented visits to his uncles building sites. Others find conventional work experience and internships. But these are all seen as additional enhancements to the PDP and not essential to pass. We often find ourselves encouraging some students to participate in opportunities if they do not appear to be taking them up. Equally, some students want to do everything and need advice on not taking on too much.

While parity of experience is an acknowledged issue, the assessment of the PDP is intended to encourage participation in extra-mural activity, not penalise non-participation. As noted above, engagement in learning is the single biggest influence on overall student achievement. Assessment balances the required engagement with the voluntary or self-initiated work. Most noon lectures are now recorded allowing all students access, even if they miss the event due to sickness. But we do expect students to demonstrate engagement in learning beyond the studio project as an essential part of their education and provide both timetabled events and support in completing their PDP. Indeed, the formatting of digital documents is introduced firstly through the creation of the PDP as the first document in first year.

Failure of a PDP is usually due to its complete omission or incompleteness, not its content. As a journal-like document we expect regular updating and maintaining the PDP on a weekly basis. Perhaps the most interesting aspect of assessment is our ability to award very high marks, especially at the beginning of third year, when students often evidence extremely beneficial engagement for an extended period following completion of second year. This often includes photographic books documenting summer travel, evidence of work experience, and development of the students own personal interests. Rather than being detrimental to the student experience, we have found the PDP a method by which we can re-affirm the value of assessment as something other than “box-ticking and bean counting” as it is often characterised. We value student engagement in learning by rewarding it as one of the central aims of education at all levels and as a key skill underlying professional and personal development. Students have even found it to be an enjoyable aspect of their time in architectural education at AUB.

“We are always encouraged to work that little bit harder and shown the value of extracurricular learning.” (NSS 2019)

Finally, it is worth quoting one last student comment:

“The opportunity and encouragement to collaborate with other students from different courses has given my work more depth and has developed in me an appreciation of all the arts as a whole. The opportunity to get involved with live projects, from both my course and others has helped to build on existing skills and learn new ones that I can take forward into work in the future. The weekly noon lectures are fantastic, they provide an insight into areas of the arts, which may have never been looked into previously, which has enriched my work.” (NSS 2018)

It is the aim of the PDP to capture this enriched student experience, encourage active learning, develop student confidence and empower them in their life-long learning.

BIBLIOGRAPHY

- Allan, D. (2003). *Personal Development Planning: Case Study (Art & Design)*, LTSN/HEA/Advance HE. Available at: <https://www.heacademy.ac.uk/knowledge-hub/personal-development-planning-case-study-art-and-design> [accessed 5.8.'19].
- ARB 2010, *Prescription of qualifications: ARB Criteria at Part 1, 2 and 3*. Architectural Registration Board, London. Available at: <http://www.arb.org.uk/information-for-schools-of-architecture/arb-criteria/> [accessed 5.8.'19]
- AUB (2018), *BA(Hons)Architecture Course Handbook 2018*, Arts University Bournemouth [availability limited]
- Beeson, S. 2016, *Make Re-Make: A temporary 1:1 Workshop for Architectural Education*, in Olson, C., Ponitz, J., Trudell, C., 2016. *1:1; The National Conference on the Beginning Design Students* (NCBDS 32) 2016, San Luis Obispo; California Polytechnic State University. p.33–38.
- Dr Seuss 1997. *Oh The Places You'll Go*. London; Harper Collins.
- EU 2005, *EU Directive 2005/36/EC on the Mutual Recognition of Professional Qualifications*. Brussels; Official Journal of the European Union, 30.9.2005. L255/48–49. <https://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:255:0022:0142:EN:PDF> [accessed 5.8.'19]
- Dearing, R. 1997, *The Dearing Report: Higher Education in the learning society*. London; Her Majesty's Stationery Office. Available at <http://www.educationengland.org.uk/documents/dearing1997/dearing1997.html> [accessed 5.8.'19]
- Gray, A. Knight P., Little, B., Metcalf, J., Moreland, N., Robinson, S., Watts, A.G., Yorke, M., Ward, R. (2007). *Personal Development Planning and Employability*. HEA/Advance HE. <https://www.heacademy.ac.uk/knowledge-hub/personal-development-planning-and-employability> [accessed 5.8.'19]

- Kumar, A. (2005) *Personal Development Planning and the Progress File*. Available at: <https://www.heacademy.ac.uk/knowledge-hub/personal-development-planning-and-progress-file> [accessed 5.8.'19]
- Madoff, S.H. 2009. *Art School: Propositions for the 21st Century*. Cambridge MA; The MIT Press.
- QAA, 2010, *Subject Benchmark : Architecture, The Quality Assurance Agency for Higher Education*, available at: https://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/subject-benchmark-statement-architecture.pdf?sfvrsn=3cecf781_14 [accessed 5.8.'19]
- QAA, 2014, *UK Quality Code for Higher Education, Part A: Setting and Maintaining Academic Standards*, The Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies, October 2014, available at: <https://www.qaa.ac.uk/docs/qaa/quality-code/qualifications-frameworks.pdf> [accessed 5.8.'19]
- RIBA, 2014, *Validation Procedures and Criteria (Second Revision May 2014)*, London, RIBA Education Department, available at: <https://www.architecture.com/knowledge-and-resources/resources-landing-page/validation-procedures-and-criteria> [accessed 5.8.'19]
- Schön, D. 1983. *The Reflective Practitioner*. London; Temple Smith