Using OneNote as an ePortfolio: Promoting Experiential Learning and Self-regulation

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Abstract
The pedagogical role of ePortfolios has been established in numerous studies. It has been suggested that ePortfolios facilitate deep learning, as they allow students to achieve a contextual understanding of their own learning. Other pedagogical advantages of ePortfolios are: enabling students to build a more holistic sense of their learning journey, enhancing learning outcomes and making learning visible.

This study draws on previous research and develops the pedagogical potential of ePortfolios further. It presents a learning ePortfolio based on OneNote, the Self-Regulatory ePortfolio, where the pedagogical functions are embedded. The OneNote ePortfolio has been designed around a learning cycle based on experiential and self-regulation learning consisting of the functions: identify / plan / action / record / review. This design of ePortfolio is much more than a tool to allow or catalyse a learning process, it is directly guiding students through the learning process and training them in self-regulative learning.

This paper reports on this new model of Self-Regulatory ePortfolio and explains its structure and features within OneNote. It presents how it has been used at the Open University to work in languages and education modules in relation to Personal Development Planning (PDP) and as a Languages Portfolio in the context of the ECML (European Centre for Modern Languages).

It reports on the promising results of pilot studies and scholarship projects carried out to evaluate this Self-Regulatory ePortfolio. It discusses the main findings of the studies and in particular the relation to students’ experiences using it. This paper concludes by suggesting further ways to implement this learning ePortfolio in other contexts and platforms.

Key words: Self-regulatory ePortfolio, OneNote, Personal Development planning

1. Introduction: The pedagogical role of ePortfolios

Over the last decade, ePortfolios have become an increasingly common component of HE programmes. They serve as constructivist learning spaces where students can reflect on their learning journeys, where they can be assessed, collect their work and demonstrate their achievements to potential employers (Pengrum & Oakley, 2017). Chaudry & Cabau (2017) stress the recent saliency of ePortfolios, demonstrating in different contexts and across disciplines how they might fit with institutional objectives as well as allowing for a greater personalisation of learning. As Pengrum and Oakley state:

"It is suggested that ePortfolios may have a role to play in supporting a shift away from today's administratively oriented, pedagogically limited learning management systems (LMSs), and towards personal learning environments (PLEs) where students can engage in more individualised, autonomous learning practices” (Pengrum & Oakley, 2017, p.21).

The term ‘ePortfolio’ can mean different things to different people. While the overarching concept from the Joint Informations Systems Committee (JISC) (n.d.) is that an ePortfolio is a collection of digital artefacts created and collected by students as a record of their learning achievements, the term ‘ePortfolio’ can also refer to both product and process (JISC, 2008). Further, different types of ePortfolio have been identified such as Showcase, Development, Reflective and Assessment (Stefani et al, 2007) and Workspace or Showcase (Barrett, 2010).

My own research on ePortfolios confirmed its pedagogical advantages and its potential to foster personal learning environments and learner autonomy.
My interest with ePortfolios started with work on the European Language Portfolio (ELP). After designing and working with different electronic ELPs, I realised the pedagogical potential of ePortfolios had not been fully explored and acknowledged. Elsewhere I argued (Perez Cavana, 2012) for a 'soft portfolio'. With the word ‘soft’, I was not only referring to an electronic portfolio, but also to the pedagogical component of the ELP as opposed to the ‘hard pages’ or reporting function of the ELP. I showed how the ELP can foster strategic self-regulated learning and metacognitive knowledge.

Following this line of inquiry I have focused on the development of an ePortfolio in the context of implementing Personal Development Planning (PDP) at the Open University (OU), a distance university in the UK. In 2016 I lead an initial pilot implementing PDP in languages modules which clearly showed two main findings:

- the usefulness for students to engage with PDP and an ePortfolio
- the difficulty of finding an appropriate platform to deliver the ePortfolio

The platform used for the pilot was technically too complicated for some students and its cost and administrative workload could not be managed by our institution. As the OU were embarking of making office365 available to all students I decided to design an ePortfolio using OneNote. This paper describes the characteristics of this OneNote ePortfolio, it reports on three pilot studies and it discusses the strengths and weaknesses of this platform.

2. Developing a tailored ePortfolio for Personal Development Planning (PDP)

The origins of Personal Development Planning (PDP) and Progress Files can be traced back to several macro-socio-political and pedagogical debates that took place in the UK around 2000-2001 (Clegg, 2004). The main aim was to put the autonomous learner at the centre of Higher Education (HE) policy and practice.

Numerous research studies suggest that an ePortfolio tool can enhance PDP. These include the contexts of staff development (Hoekstra and Crocker, 2015), children’s classrooms (Barrett, 2005), postgraduate students (Marais and Perkins, 2012) and nursing undergraduate students (Howes et al., 2011; Toner and McDowall, 2015). While these contexts do not correlate directly to OU undergraduate language students, the findings appear to be consistent in suggesting that ePortfolios can encourage students to become aware of PDP in general, as well as encouraging them to reflect on areas needing improvement.

2.1. PDP: Definition and aims

PDP has been defined as a “structured and supported process undertaken by a learner to reflect upon their own learning, performance and/or achievement and to plan for their personal, educational and career development” (QAA, 2009, p.2).

According to Gough et al. (2003) the primary objective for PDP is to improve the capacity of individuals to understand what and how they are learning, and to review, plan and take responsibility for their own learning.

PDP helps students:

- to become more effective, independent and confident self-directed learners
- to understand how they are learning and relate their learning to a wider context
- to improve their general skills for study and career management
- to articulate personal goals and evaluate progress towards their achievement
- to encourage a positive attitude to learning throughout life.

QAA (2009) suggests a cyclical process or learning cycle in relation to PDP, based on Kolb’s (1984) experiential learning theory (Figure 1).
Like McEntee (2013), the OU defines five stages, as seen in Figure 2, provided to students via the OU Help centre in the section entitled ‘Develop your career’ (Open University, 2018).

Figure 1: Cyclical Model (Based on Kolb, 1984, adapted from QAA, 2009, p.6).

Figure 2: Stages within the OU PDP process

2.2. A tailored ePortfolio for PDP

From 2016-2018, I led an interdisciplinary team to pilot the implementation of a new approach to Personal Development Planning using the Three-layered model (Perez-Cavana and Lowe, 2018) in an ePortfolio. Through successive pilots we designed and refined our learning ePortfolio prototype. For the first pilot we used an ePortfolio developed by the University of Bremen called EPOS. Originally designed as a languages ePortfolio following the structure of the European Languages Portfolio, we adapted EPOS specifically for PDP at the OU by integrating the pedagogical functions (identify, plan, record, review) in the main tabs (see Figure 3) in order to facilitate the visualization of the pedagogical process.

Figure 3: The ePortfolio EPOS for PDP

The rationale behind inserting these PDP functions in the ePortfolio was twofold: cognitive, to help to understand what PDP is about, and practical, to facilitate the factual work with PDP (learning by doing).

At the time of the second pilot study, the OU was starting to provide students with Microsoft Office 365, a cloud-based suite of tools including OneNote. This aligned to Kim et al.’s (2010) proposal of a cloud-based approach for ePortfolios. We therefore piloted the use of OneNote as a means of supporting students in their PDP.
As advocated by Howes et al. (2011), we provided a structure within the ‘ePortfolio’ through the creation of a template in OneNote which we then made available to the students. Once set up with Office 365, students installed the OneNote template on their own devices. They had a choice of desktop version and cloud-based, potentially syncing the two and using both depending on their location and device to hand.

The template in OneNote (Figure 4) was a simplified version of the EPOS ePortfolio used in Pilot A (Figure 3) but maintaining the idea of the tabs to provide guidance through the stages of PDP (Identify, Plan, Record, Review). Under each of the tabs was space, in some cases with minimal scaffolding in the form of frameworks or prompt questions, and in other cases, space for students to use as they wish.

![Tabs created within OneNote](image)

**Figure 4**: Tabs created within OneNote

One of the advantages of using OneNote was that it is very easy to customize by the users. Under the tabs and in their personal space, students were able to enter their thoughts as text, in paragraphs, in tables, in lists. They can upload photos of work done or inspirations, upload audio/video recordings of themselves reflecting, upload their assignments containing tutor feedback. They could make use of check boxes to help prioritise and to keep track of progress.

### 2.3. The OneNote Self-regulatory ePortfolio

Many teachers and educators have used or are recommending OneNote to work with their students to organise the work of students. There are a number of different YouTube videos and blogs (Cocklin, 2018), suggesting the use of OneNote as an ePortfolio, but to my knowledge it does not appear to have been used systematically in a HE institution. There are two main contributions from the work that we have been carrying out at the OU: firstly the implementation of OneNote and the data collection regarding usability, technical challenges and learner experiences and secondly, the pedagogical principles that have driven the development of this ePortfolio.

As mentioned above we integrated the pedagogical principles of the learning cycle in the ePortfolios used for PDP. This learning cycle (Figure 1) clearly represents the principles and philosophy of self-regulated learning.

Jackson (2005) has pointed out that Self-Regulated Learning (SRL) provides a research-based explanation of the processes that underlie PDP and helps us understand the dispositions, thinking and behaviours that PDP promotes.

There are different models of SRL. According to the cyclical model proposed by Zimmermann (2000) there are three phases in SRL: Forethought, Performance and Self-reflection. These phases closely match the PDP functions:

- Forethought – (Identifying / Planning)
- Performance – (Action, Recording)
- Self-reflection – (Reviewing, Evaluating).
When learners go through the learning cycle within their portfolio, they collect evidence of their work in the “Record” function. This way they can integrate the “Product” function within the “Process” function of their ePortfolio. This Self-regulatory ePortfolio facilitates the integration of those two aspects that have traditionally been considered conflicting.

3. The pilot studies
The Three-layered model described above was built on the data and experiences gathered from three pilot studies carried out at the Open University between 2016-2018. Table 1 provides a comparative overview.

Table 1: Overview of the three pilot studies

<table>
<thead>
<tr>
<th></th>
<th>Pilot A</th>
<th>Pilot B</th>
<th>Pilot C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>Level 1 L161 Exploring languages and culture students (11 completed responses)</td>
<td>Level 2 Spanish alumni (15 completed responses)</td>
<td>Level 1 Languages, Level 2 Education, PG Education students (12 completed responses)</td>
</tr>
<tr>
<td>ePortfolio tool</td>
<td>EPOS (Mahara-based ePortfolio developed by the University of Bremen, Germany)</td>
<td>OneNote template (desktop and online versions, part of Microsoft Office 365)</td>
<td>OneNote template (desktop and online versions, part of Microsoft Office 365)</td>
</tr>
<tr>
<td>Data collection</td>
<td>Pre-survey questionnaire, post-survey questionnaire, open comments, interviews</td>
<td>Pre-survey questionnaire, post-survey questionnaire, open comments, interviews</td>
<td>Pre-survey questionnaire, post-survey questionnaire, open comments, interviews</td>
</tr>
</tbody>
</table>

The pilot studies carried out between 2016 and 2018 in the context of the implementation of PDP at the Open University using an ePortfolio have been thoroughly described elsewhere (Perez Cavana and Lowe, 2018, 2019). In this paper I will just briefly describe the data collection and I will report on the main findings.

3.1. Method: Data collection
We used a pre- and post-survey online questionnaire. Overall, 101 students were invited to take part in the three pilots by email and at the end of the surveys we collected 38 end-of-pilot survey responses (37.6 % response rate). Due to the low number of participants, the quantitative data in terms of percentages are not significant. However, as the questionnaires were semi-structured, we collected a significant number of open comments. We also carried out 17 in-depth interviews with students. The open comments and transcripts of the interviews were analysed using a procedure of four stages of thematic analysis as described by Bryman (2008). It should also be noted that, despite the low numbers, the student profiles reflected a typical range of OU language students.

3.2. Findings
The implementation of PDP, using a self-regulatory ePortfolio, enabled distance students to understand and experience a complex but very useful way of working, and to relate it holistically to their learning and to themselves as learners.

Students responded very positively to the Three-Layered Model (PDP, ePortfolio and activities) as it guided them through the PDP process. We have grouped the comments around three main areas as they emerged from the interviews and open comments in the online surveys. We will discuss each in turn.

The three main areas emerging from the surveys are:

1. Enabling students to develop Self-Regulated Learning
2. Increase student motivation
3. Enabling students to develop a different view of their studies and themselves.

### 3.2.1. Developing Self-Regulated Learning

Students reported that working with PDP enabled them to develop new competences. In particular they developed a sense of responsibility in relation to their learning. They were able to relate PDP to their life and to making progress in meeting personal goals. These new competences included the ability to identify their skills, the ability to critically reflect, to recognise things of importance and the ability to carry out self-analysis. They were able to give more in-depth responses and be more focussed on their study. One student said “It does make me think about how I learn, and it makes me think where I want to go with my modules... I’m taking control of my learning rather than just going with the flow”.

Students developed a new awareness of their strengths and weaknesses, and of their limitations. They felt that their ability to clarify and identify weaknesses and strengths made their goals more achievable as they could see where they were going and how to get there. In this sense, some students reported that PDP “gave them self-confidence”. They were able to identify where improvement was needed this made them feel more confident and focused as they realised the relevance of the activities. The students suggest having a better understanding of what they were doing and why was deemed helpful. Just the fact of understanding and realising made it more relevant for the students when looking into their goals and tasks, they were able to define exactly what they wanted, and to realise that these goals were more achievable. They also had the experience that when you learn to plan, goals seem to be more manageable and easier to reach. One student commented: “The more conscious you are of your strengths, weaknesses and what experience has taught you, the more likely you are to make informed choices about what to pursue.”

Students felt that working with PDP was enabling and helpful in different areas. One aspect was in relation to managing their learning: it enabled them to revise and improve further helping them to orientate their thinking towards module content. Working with PDP enabled students to develop their metacognition, it helped them to critically analyse, carry out self-evaluations and review. It also helped them to organize their learning, to manage their time and make informed choices. One student wrote “Some skills I had not previously been able to describe, and by seeing them written down in activities I was able to look at them from different perspectives.”

The students perceived that PDP allowed them to see connections between different goals and different areas of their lives – personal, academic and professional. Thinking about their goals in relation to each of the three areas and then seeing how the goals interrelate was an unexpected experience for some of the students as they had not had this opportunity before. They also realized how working towards one objective enhances the achievement of other objectives because they are often connected. In relation to this, two students wrote: “Understanding connections of efforts can help achieve goals”; “I guess it was both motivating and as a consequence useful to become a more effective learner. It was interesting to see how one simple exercise could change the way of thinking and made me realise how connected the objectives are.”

The activities were divided into four steps: (A) Identify strengths and weaknesses in relation to the learning objectives; (B) Plan how to improve what was identified as a weak point; (C) Record evidence of strong points; and (D) Review the whole learning process. This step by step approach used in the PDP activities was perceived as very useful by most of the students (9 out of 10). One student wrote “Interesting to break down in smaller mini-activities or mini-challenges. A good tool for future use”.

### 3.2.2 Increasing motivation

Different aspects of motivation were reported by students when describing their experiences working with PDP. These include:

- working with a new tool can increase motivation.
- Being able to see their own goals clearly and realise that they are achievable.
- Being able to revisit the initial reasons for study.
- Being able to set out what they want to get out of their learning journey.
Reflecting on goals and understanding them, as well as the experience of becoming a more effective learner were deemed motivating. The fact that PDP helps to make their learning goals clearer and more tangible motivates students to achieve them. One student said: “It enables you to collect the evidence of competencies, achievements, feedback to look back [at] when you feel slightly demotivated or in need of a push.”

Students felt that putting everything in one place was a big advantage, as it helped them to develop and link their goals and experiences. Students also felt that the ePortfolio helped to structure their thinking. Being able to link self-evaluation and planning in EPOS was deemed very useful. It was also considered very useful in relation to employability, such as being able to articulate and present capabilities to an employer, and to apply for a job. One student wrote: “I think that the ePortfolio is a great idea and enables you to put a full breakdown of your skills, development goals and experience in one place. Excellent for job applications and being able to better articulate your abilities to an employer.”

3.2.3. Developing a different view of their studies and themselves

Different perspectives
Working with PDP allowed students to see things from a different perspective. It showed them that there are many reasons to study, and it is possible to envisage and consider a career plan. They were able to make links between working independently and managing their time. It encouraged them to expand their thinking when completing assessment tasks and it showed them the advantages of this type of ‘linking thinking’ rather than considering the module materials in isolation. This was mind opening.

One student wrote about how working with PDP was life-changing for him: “I wasn’t expecting much from PDP, but I am so happy that I participated [in the pilot]. I was able to think about things I haven’t thought [about] before. I started studying to escape from a difficult situation in my life and to keep my head busy, but through PDP I realised that I can make plans and relate to what I really want for my future. [...] I am going to do my degree in languages to become a language teacher.”

Seeing the bigger picture
Several words related to ‘seeing’ were used to express how PDP enabled students to achieve clarity about different aspects of their learning, their strengths and their weaknesses. It enabled them to see the bigger picture in relation to their goals, keep track of progress and think about what to focus on.

One student wrote about their experience: “It allows us as a student to see what we are capable of, what we have achieved and what we are competent in”.

The ‘bigger picture’ seems to refer to the fact that through PDP students develop the ability to look at the wider context of their learning, it broadens their field. It has to do with remembering why they are undertaking the module and connecting it with their long-term goals, but also with having a better understanding of the aspects they need to improve. One student commented: “Identifying the goals and aims, breaking them into different categories and then seeing the bigger picture would allow me to better focus on the weak parts and find tools and strategies to improve them.”

Sense of direction
Students also reported that having a clear structured path helped with orientation, a ‘reminder’ about their learning objectives and their learning path. For example, “Reflection can serve as a reminder when you lose your way on the learning journey and gives you motivation to keep going”.

The different steps of PDP helped them to learn how to be methodical in approaching their learning. One student wrote: “Method helps focus on what you have achieved and what is still to do”; another student said: “I think the PDP will help students to adopt a more structured and systematic way of talking about their studies; it shows you how to be methodical so that you set out a study plan and regularly review your own progress as you learn”.

4. Implementing OneNote for the European Language Portfolio (ELP)
I have designed a similar OneNote ePortfolio for the European Languages Portfolio. Although this ePortfolio does not have the same functions as the PDP one (Identify/Plan/ Action/ Record / Review), the pedagogical self-regulatory cycle is also the basis of the structure. The tabs have been made relevant for the specifics of
languages learning and follows the traditional structure of the European Languages Portfolio. Table 2 shows the comparison between the two types of ePortfolio tabs.

**Table 2 Comparison Languages and Self-regulatory ePortfolio tabs**

<table>
<thead>
<tr>
<th>Languages ePortfolio</th>
<th>Self-regulatory ePortfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding (Listening – reading)</td>
<td>Identifying</td>
</tr>
<tr>
<td>Speaking (production – interaction)</td>
<td>(Self-assessment of the CEFR can-do descriptors)</td>
</tr>
<tr>
<td>Writing</td>
<td></td>
</tr>
<tr>
<td>Learning objectives</td>
<td>Plan</td>
</tr>
<tr>
<td>Dossier</td>
<td>Record</td>
</tr>
<tr>
<td>Learning journal</td>
<td>Review</td>
</tr>
</tbody>
</table>

This OneNote ELP is currently being piloted in workshops and HE institutions in different European countries where data will be collected to enable an evaluation of OneNote for ELP.

5. Conclusions

The pilots carried out with language and education students at the OU in the UK have provided valuable insights into the usefulness for students of engaging with an ePortfolio to work with PDP during their studies and the challenges of embedding an ePortfolio within a module or programme. The pilots also revealed what students valued about their work in relation to a Self-regulatory ePortfolio: In the context of their PDP what it brought to their studies included the possibility of developing new capabilities and a new self-awareness; the possibility of becoming a more autonomous learner and feeling more motivated. Therefore, this ePortfolio is much more than a tool to allow or catalyse a learning process, it is directly guiding students through the learning process and training them in self-regulative learning.

The self-regulatory model of ePortfolio presented in this paper, guided students through the different steps of their learning and their work with PDP using the tabs in their EPOS or OneNote ePortfolio. Each step was clearly explained in relation to the PDP principles, in relation to the module they were studying and their broader life context, and with guidance about how to reflect on or record the activity using their EPOS or OneNote ePortfolio.

The first pilot (EPOS) demonstrated that a complicated delivery platform unfamiliar to students and relatively complicated to use can distract students from the process of PDP itself. One of the advantages of using OneNote was that it is really user friendly and very easy to customize by the users. Under the tabs and in their personal space, students were able to enter their thoughts as text, in paragraphs, in tables, in lists or to upload audio and video. They could make use of check boxes to help prioritise and to keep track of progress. Finally, as a tool potentially used outside of the academic sphere – in daily life and in the workplace – OneNote supports the very essence of PDP in promoting the transfer of skills, knowledge and experience from one aspect of life to another, for this reason we are currently using OneNote in other contexts, such as the European Languages Portfolio.

The data we have gathered regarding the Self-regulatory ePortfolio and the use of OneNote are very promising. The integration of pedagogical principles in the structure of the ePortfolio clearly fostered the metacognitive skills and confidence of students. It also empowered them to take control of their own learning. Regarding the use of OneNote there is a need to carry out more studies in different contexts and with different types of learners. A further question that needs to be explored is whether the proposed ePortfolio can adequately address the demands of the two main aspects of an ePortfolio: the product and the process. In particular the product (output) side of the ePortfolio
6 References:


JISC (n.d.) ‘E-portfolios’, Guides. Available at: https://www.jisc.ac.uk/guides/e-portfolios


