

Formative Assessment using Digital Portfolios

A Teacher Education initiative of the Professional Development Service for Teachers (PDST)

Summary

As the grip of the most significant health crisis of our time has tightened around and indeed dislodged the educational pillars that symbolised what we considered normal, many aspects of teaching, learning and assessment have been brought to the centre of the debate not least the role of digital technologies and assessment. Making sense of these big ideas is neither a new, or straightforward task. This case study explores a teacher education initiative in Ireland that supports the implementation of digital portfolios and how assessment literacy is enhanced through digital formative assessment. The case study provides learning from this initiative at the classroom and whole-school level.

The policy context

At a policy level, the [Digital Strategy for schools 2015-2020](#) (Department of Education and Skills, Ireland, 2015) expresses a commitment to explore ways in which digital portfolios can enhance teaching, learning and assessment across the continuum from initial teacher education to teacher education. The objectives of the strategy were deliberately aligned with other policy and curricular directions none more so than the curricular revision at the lower Secondary level ([A framework for Junior Cycle](#)), a framework designed upon eight key principles and key skills.

[The Professional Development Service for Teachers \(PDST\)](#) is Ireland's largest single support service offering professional learning opportunities to teachers and school leaders in a range of pedagogical, curricular, and educational areas. The PDST was established in September 2010 as a generic, integrated, and cross-sectoral support service for schools.

The [Junior Cycle framework](#) presents a dual approach to assessment: formative assessment strategies are used to inform the learning process over the three years while a summative assessment component is also used at the end of the three years as part of the reporting process.

The Digital Portfolio Initiative



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PDST's initiative "*Formative Assessment using Digital Portfolio*" sought to develop and deepen an understanding of digital portfolios as a collection of evidence that is gathered to show a person's learning journey over time and to demonstrate their abilities ([EUFolio, 2015, p. 9](#)) and to examine the digital portfolio as storage, workspace and showcase. The initiative was made available to all post-primary schools in Ireland offering the transition year programme (90% of the 723 schools in Ireland offer either an elective or compulsory Year 4).

The Transition Year Programme is a Year 4 interdisciplinary programme after Junior Cycle (i.e., the lower secondary level in Ireland). It is cross-curricular in nature and the variety of experiences provided ensured that schools were already flexibly assessing learning with many using a paper-based portfolio for this purpose.

After the initial phase, the initiative opened for use beyond the transition year and to all schools across the country. The number of participating schools who utilise the initiative solely with their Transition Year Programme has declined, showing the initiative's success in supporting schools to adapt to the reform. To date, 150 schools have participated in the project.

History of the Initiative

- *Phase 1 (Pilot):* September 2015 - June 2017
24 schools, Transition Year Programme Only
- *Phase 2:* February 2018 - May 2019
34 schools, not confined to Transition Year
- *Phase 3:* February 2019 - May 2020
44 schools, greater focus on formative assessment
- *Phase 4:* November 2019 - May 2021
47 schools, continued focus on formative assessment

Project Planning Phase

Schools are invited to apply to participate in the initiative through an online expression-of-interest form which is advertised one year before a given phase of the initiative will commence in schools.

Schools are asked to describe their existing digital infrastructure. If a school's infrastructure needs significant development, their application is re-routed to a more suitable support mechanism with the option of the school joining a subsequent phase of



the initiative. As part of the Digital Strategy, a multiannual funding of €210 million has been made available to the school sector by the Department of Education to support the development of ICT infrastructure in schools.

Schools accepted into the initiative are supported through a model of sustained professional development which supports coordinators of the initiative in developing their pedagogical content knowledge, their technical expertise and their leadership and management skills.

The professional development programme comprises three components: (1) Bespoke individual school support; (2) programme of induction seminars; and (3) the Digital Portfolio Toolkit.

Bespoke Individual School Support

A PDST advisor (instructional coach) is assigned to support each school during the initiative. The advisor works with the principal to identify two teachers to coordinate the initiative in their school. In an ideal situation, coordinators are competent in the use of digital tools for teaching, learning and assessment.

For teachers, the intention is that the digital portfolio is embedded within their timetabled teaching time while the coordinator is provided with some time to work with these teachers. This generally occurs within the 33 additional hours that teachers provide outside of their timetable for school planning and CPD. Substitution cover is provided for those attending the external continuous professional development (CPD).

Programme of Induction Seminars

Induction begins eight months before implementation to allow sufficient time for training of staff, timetabling, upgrading of infrastructure, etc. The first induction event is attended by principals and coordinators and focuses on introducing the initiative and starting the planning process. In between the first and second induction events, coordinators complete [an online course on digital portfolio](#).

The second induction seminar continues the planning process and includes a session on the role of leadership in ensuring the success of the initiative. Coordinators draft an implementation plan specific to their school.

The second and third induction seminars focus on developing coordinators' understanding of formative assessment practices and exploring digital formative



assessment. Technical training is integrated across the various sessions in seminar 2 and 3, where participants engage with rich tasks applying formative assessment practices to their online platform.

Since the third induction seminar happens during the implementation phase, an opportunity is provided for coordinators to discuss the successes and challenges of the implementation so far. The final induction event takes place towards the end of the school year and is an opportunity for schools to showcase their learning and reflect on the initiative in their school. Schools discuss challenges they faced and solutions they found and consider the next steps for maintaining and developing the initiative beyond the current school year.

Digital Portfolio Toolkit

Assessment is the process of generating, gathering, recording, interpreting, using and reporting evidence of learning in individuals, groups or systems. Educational assessment provides information about progress in learning, and achievement in developing knowledge, behaviour, and attitudes (The National Council for Curriculum and Assessment, 2015).

A [toolkit](#) developed by the PDST provides resources on formative assessment and technical support for digital portfolio use. The purpose of this toolkit is to support coordinators to develop their own expertise but also to resource their support of colleagues in school.

Initiative Outcomes

Student Voice

- “The digital skills learned will be most beneficial for me in the future because digital technologies are never going to go away and it’s going to be very important in all aspects of work.”
- “I love my page for the school musical because I was able to talk about how much I loved being involved in everything and share my own experience of it. I always go back on that page and read it all over again and it brings back how much it changed me as a person and how it made me more confident in myself.”
- “I’m proud of the way I could design it myself and how it wasn’t the same as anyone else’s.”



- “My portfolio got better as I got feedback from my teacher and my peers and I thought about it.”

Teacher Voice

- “The use of formative-assessment strategies has been hugely positive because we ask students to not only present their work but to redraft it based on the feedback they receive from their teachers and their peers. They’re able to reflect on what’s changed between the original draft and the final draft which gives them a fuller learning experience.”
- “From an environmental point of view, digital portfolios are important as they cut down on the amount of wasted printing. Other advantages include being able to keep track of student’s learning much better and being able to discuss students’ work with parents at parent-teacher meetings.”
- “The use of the digital portfolio for students to keep their own work clearly fostered independent learning and encourages students to manage their own information.”

School Leader Testimonies

- “The provision of support which was tailored to our school was very important - that’s what you need when introducing a new initiative because all schools are different.”
- “The digital portfolio was used predominantly as a repository with some initial steps towards engaging with formative assessment strategies. We need to encourage greater students and teacher engagement with formative assessment.”
- “Digital literacy has been greatly improved through digital portfolio.”

Research – Realising the potential of digital portfolios

[Rahimi, van den Berg and Veen \(2015, in English\)](#) propose a 4-stage process model to guide the design of student-centered instructional approaches that engage students in complex problems (e.g. project-based learning, problem-based learning, inquiry-based learning):

1. Forethought (providing choices) – Teachers provide the general assignment, suggest learning resources, group work structure and Web 2.0 tools (e.g. digital mind mapping, e-/digital portfolio, brainstorming, blogging, co-authoring and storytelling).



2. Performing (scaffolding) – Students carry out their learning plans. The pedagogical design of scaffolding of learning activities supports learners.
3. Reflecting (assessing) – This phase is seen as essential to learning to learn and self-regulation. Students evaluate their learning strategy and outcomes and consider how to improve it in the future. Teachers should provide triggers for reflection and involve students in a dialogue about their learning. This may be augmented by learning analytics.
4. Feeding back (applying) – students should be encouraged to actively participate in constructing and re-shaping the learning environment.

The task for teachers is to scaffold learning so that students can develop competences and assume control of their learning and to provide students with opportunities to develop their own learning environments.

Lessons learned

A number of challenges have arisen over the duration of the initiative.

Sustainability and Continuity

Since support for schools lasts approximately 18 months, problems around continuity have arisen due to coordinators moving school, taking on different roles within their school or being on leave. To address this issue, starting with Phase 4, schools have been advised to select two coordinators instead of one.

Profile of coordinators

During Phase 1 and 2 of the initiative, it was observed that the profile and choice of coordinator played an important role in the successful implementation of the initiative. To address this issue, an additional step in the planning phase was added whereby PDST advisors support the school principal in the planning stage in identifying teachers who are best placed to take on the role of coordinator. This process has also been helped by the inclusion of a second coordinator, as this ensures the coordinating team has a suitable combined experience.

Leadership

A key contributor to the success of any school-based initiative is leadership. Taking this into account, school principals are encouraged to attend the first induction seminar and the shared learning day. However, a distributed leadership approach to leadership is taken. To support coordinators in this aspect of their role, there are dedicated sessions on leadership and management included in the first two induction seminars.



Furthermore, time is allocated to coordinators back in their schools to plan for the initiative. The coordinator role is voluntary, and there are no fixed arrangements. Therefore, school leaders work within what is possible at school level to support their engagement and allocate time.

The PDST advisors use a facilitative/coaching model to support coordinators to identify the approach which is best suited for their own school and to solve any issues which emerge.

Whole-school teacher Buy in

While the initiative is coordinated by two teachers, in most cases a much larger number of teachers are involved. For example, if the initiative is being introduced to a class of Transition Year students, all subject teachers of Transition Year will be involved in the use of digital portfolios. This presents a number of challenges including the professional development of teachers to successfully engage with the initiative. The issue of teacher professional development is addressed as part of the school's implementation plan - developing the plan five months before the start of the new school year gives schools sufficient time to provide professional development workshops for staff and to make changes to the timetable.

Coordinators are further supported with this professional development by their PDST advisor and through access to the digital portfolio toolkit.





Figure 1 A video from the toolkit explains the pedagogical principle behind digital portfolios and how to get started with them.

Teacher buy-in is addressed by providing teachers with evidence of the value of the initiative (e.g., through sharing of published research and school testimonies, through periodic reflection on the successes of the initiative within a school) but also by external factors such as a move towards project-based assessments across the curriculum. There is always significant interest in the initiative as schools understand through curricular reform and policy direction that we are moving in this direction.

Digital Formative Assessment

While the initiative is called *Formative Assessment using Digital Portfolio*, it was observed during Phase 1 and 2, that schools tended to focus more on the digital portfolio element of the initiative and less on formative assessment. This was evidenced during the end-of-year shared learning days, where schools tended to highlight the challenges in setting up their digital portfolios and in their use for storage and showcase. Often the use of the portfolio as a workspace and the role of formative assessment therein was not mentioned.



To address this issue a number of steps were taken. Before accepting schools into a given phase of the initiative, the PDST advisor worked with the principal to carry out an audit of the school's readiness for participating. If a school lacked the infrastructure to fully engage with the aims of the initiative, the school was redirected down an alternative path of support and encouraged to reapply for the initiative at a later date. The structure of the induction seminars was altered to highlight the importance of the formative-assessment side of the initiative and the discrete technical support sessions were reduced in favour of better integrating the digital-portfolio elements of the learning within the formative-assessment sessions of the seminars.

Technical support

Across all phases of the initiative, it was observed that schools required a significant level of technical support in the set up and use of their digital learning platform, even though this was not the purpose of the initiative. This issue was addressed in several ways.

Schools whose digital infrastructure needed significant development were identified and rerouted to a different support path. Schools were directed to other means of acquiring the technical support they needed (e.g. applying for support from the PDST Digital Technologies team, availing of support from their management body, availing of support from their learning-platform provider). To help with this process, the PDST team developed a digital-portfolio toolkit which links different formative assessment practices to the accompanying digital skill (see **Error! Reference source not found.**). This toolkit is available [here](#).

Maintaining momentum

As with any new initiative in schools, there is an energy which surrounds its initial implementation which may subsequently be followed by a loss of momentum.

To address this issue, the third induction day was placed strategically a number of weeks into the implementation phase. The structure of this day has also developed over time to provide space for coordinators to reflect on the successes and challenges of the initiative to date and to solve common issues as a group.

Central communications by the PDST are scheduled regularly, to check in on progress and these communications are followed up by contact between the PDST advisor and their school. It is agreed that PDST advisors will aim to have at least one support session with their schools every half term.



The shared learning day also supports the maintaining of momentum. As coordinators present their school's story at these days, this has a motivating effect on continuing to develop the initiative into terms 2 and 3 of the school year. It is our experience that the act of presenting their school's story has a positive impact on coordinators' commitment to continuing to develop the initiative in their school. The planning session, which is part of the shared learning day, also provides a space for coordinators to reflect on their progress and to begin planning for maintaining the initiative into the next school year.



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