Linguistic and psychological bases of the self-developing personality: the effective practices of the implementation of "Portfolio" technology

A.Yu. Arsentyeva¹, O.N. Prokofieva², and E.I. Khachikyan³

¹ "Kaluga State University named after K.E. Tsiolkovski", Kaluga, Russia
² "Kaluga State University named after K.E. Tsiolkovski", Kaluga, Russia
³ "Kaluga State University named after K.E. Tsiolkovski", Kaluga, Russia

Abstract. Self-development is one of the structural components in the competitiveness model of the student’s as prospective specialists. Linguistic and psychological bases are one of the most important elements of self-management, indication of competitiveness and the self-evaluation process as well. The aim of the research was to analyze and evaluate the effective practices of the implementation of "Portfolio" technology. Portfolio is one of the pedagogical tools for facilitation of self-development of competitiveness of prospective specialists in the study environment at university.

1 A problem statement

The digital society in which we live, learn and work has led to fundamental changes and, more than ever, universities need to develop critically reflective, life-long learners. This important synthesis of the literature shows that learning portfolios, when fully embedded and supported in the student learning experience, can play a key role in fostering life-long learning and nurture important attributes of civic engagement, global citizenship, enterprise, empathy, and leadership.

The use of portfolios was traditionally associated with the fine arts, as a means for individuals to showcase samples of their work, however, in recent years, they have come to be used as pedagogical and evaluative tools in a wide variety of disciplines, and across all levels of the education system [1-4]. Various definitions for the term ‘portfolio’, as used in educational practice, have been offered in the literature; although the following, [5], is particularly comprehensive: ‘a portfolio is an organized compilation that demonstrates knowledge, skills, values and/or achievements and that includes reflections or exegesis which articulate the relevance, credibility and meaning of the artefacts presented.’

Examples of the types of artefacts that may be presented in a learner’s portfolio include samples of their writing, photographs or videos documenting their accomplishments, and teachers’ or mentors’ evaluations of their performance in a given area. Initially, these compilations were physical in nature, but advances in technology have facilitated the

* Corresponding author: ipcs-profped@yandex.ru

© The Authors, published by EDP Sciences. This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (http://creativecommons.org/licenses/by/4.0/).
emergence of electronic portfolios, or ePortfolios. There has been some debate as to whether an ePortfolio is essentially a paper-based portfolio, that “just happens to be stored in an electronic container” [6], or whether it represents something conceptually separate.

Learning portfolios are intended to support, measure and document critically self-reflective lifelong learning, and they are perceived to be a valuable pedagogical tool for higher education institutions seeking to broaden learning experiences, such that their graduates may ultimately embody a range of “21st century skills” and competencies.

Learning portfolios are conceptually distinct from showcase and assessment portfolios in that their primary purpose is to support and enhance learning, via the processes involved in their construction, as opposed to providing summative evidence of skills and achievements. It follows that an understanding of these processes is crucial for their success as learning tools, as discussed above. In practice, however, it should be appreciated that universities and higher education institutions usually view portfolios as fulfilling multiple purposes simultaneously. In almost all of the studies discussed in the previous section, the learning portfolios were formally assessed at the end of the semester and assigned a grade. Furthermore, in the domains of teaching and healthcare education especially, learning portfolios are often linked to external standards or professional registration requirements, and as such, double up as a long-term, demonstrable record of these competences. In this way, individuals may continue to use their portfolios after they have left university to support future job applications, or to record their ongoing professional development [7], [4]. The idea that portfolios may not only support learning; but also serve as evidence of competence for future employers is certainly attractive in principle. The literature, however, has returned mixed results as to whether conceiving of learning portfolios as products is advisable. The use of portfolios as learning tools in higher education contexts is increasing rapidly [8], [9]. Although there is a strong theoretical foundation for their use, an overview of the research literature reveals insufficient empirical support for their effectiveness. Over and above the problem of potential positive reporting bias in the literature, many studies have shown that portfolio implementation can be fraught with difficulties, due to insufficient understanding of the processes involved in their construction [10], [4] and tensions between the developmental and evaluative aspects of the portfolio [11].

A handful of studies have reported positive outcomes associated with portfolio use, such as enhanced reflective ability [12], development of self-regulated learning [13] and improvements in key cross-disciplinary competencies [14], however, almost all of these (i) were based on a single implementation of portfolios in one university over a short period of time, (ii) employed a very small sample size and (iii) did not measure learning outcomes directly; rather, inferred them via the proxy of students’ and teachers’ perceptions.

1.1 The objective of the work

The main methods include the following: theoretical methods (studying theoretical sources and scientific publications, Internet resources, analysis, synthesis, generalization); diagnostic methods (questioning, testing); statistical methods for processing experimental data.

2 Materials and the results of the research

It is clear from the extant literature that the successful and sustainable implementation of learning portfolios in a higher education institution requires considerable planning and preparation, and a substantial commitment from staff (both academic and technical) and students (learners). If this is not the case, the experience is likely to be as [9] described,
“like a game of snakes and ladders, where initial rapid progress can suffer major setbacks due to a poor understanding...of the threshold concepts.” In terms of future proofing the practice such that potential ‘snakes’ are avoided, it is suggested that:

(i) Formal pedagogical and technical professional development in portfolio processes should precede any attempt at implementation

It cannot be taken for granted that instructors- let alone learners - comprehend the key processes involved in the creation of learning portfolios. Portfolio use is based on a relatively novel and sophisticated pedagogy, and it continues to evolve in response to changing educational demands. Indeed, as [8] pointed out, in the absence of an overarching professional organization, and a formal set of guidelines for best practice, the use of learning portfolios in higher education “remains a movement, not yet afield”.

Individual institutions thus have a responsibility to engage with the literature -and with each other – in order to develop a collective understanding of the theory underlying learning portfolios, and of specific portfolio practices such as reflection and self-regulated learning. This will enable relevant stakeholders to provide better informed and coherent support for teachers in developing same. Teachers, in turn, have a responsibility to avail of this support, to communicate the value of the tool and the nature of the processes to learners, and to develop curricula, learning activities and instructional methods that facilitate true engagement with these processes. Ideally, all of this should take place before learners embark on the task of portfolio construction.

(ii) The tool should be named and conceptualized with its primary goal in mind

Given that the primary purpose of a portfolio is its most important characteristic, the nomenclature should reflect this. If the intention is to support lifelong learning, then learning portfolio (as opposed to ePortfolio) seems the most appropriate term.

Furthermore, if higher education institutions are introducing learning portfolios with the aim of producing “T-shaped” rather than “I-shaped” graduates, then the emphasis needs be placed on developing the broad, cross-curricular skills that constitute the difference between these two concepts. That is, learners need to be scaffolded in developing skills such as critical thinking and metacognition through the creation of their portfolios. Such scaffolding can be facilitated by building strong constructive alignment between individual course learning outcomes, program level goals and outcomes, and institution-wide generic graduate attributes [15]. If assessment is to take place, it should be these dispositions, and not the content of the portfolio, that is assessed; such that learning portfolios ultimately complement traditional tools that contribute primarily to the development of deep, disciplinary knowledge.

Conceptualizing portfolios as learning tools, as process-driven, and as catalysts in the development of the horizontal bar of the “T”, may also help ease the well-documented tension between their developmental and evaluative components.

(iii) Learners should “own” their portfolios

Learners should be granted autonomy in selecting the nature of the artefacts to be included in their portfolios, and – if feasible – the platform used to create them. A true sense of ownership may enhance intrinsic motivation and engagement with the portfolio process, leading to a more meaningful learning experience, and fostering the wider goal of nurturing self-directed lifelong learners. In a similar vein, a sense of ownership may also increase the likelihood of learners continuing to use and benefit from the portfolio after university [16]. It is not that guidelines and rubrics should be avoided completely; rather they should pertain solely to the processes involved in constructing the portfolio, whilst allowing learners to make their own choices regarding content, formatting, etc.

(iv) Technological platforms should seamlessly facilitate, rather than interrupt the process of portfolio construction
If institutions make the decision to use a particular ePortfolio platform, they must be cognizant of the need to provide sufficient training and support in navigating the platform, to both teachers and learners, on an ongoing; and if necessary, individual basis. The common assumption that today’s higher education students are ‘digital natives’, and will thus adapt easily to prescribed ePortfolio software is misguided [17], [18], and should be avoided. Problems may be mitigated somewhat by introducing the various features of the chosen software on a gradual, cumulative basis. A more promising alternative, however, may be to allow each learner to create their portfolio using a platform of their choice, especially if the goal is to promote self-regulated lifelong learners. Ultimately, technology should never supersede pedagogy as the primary focus in a learning portfolio program.

When developing criteria for the diagnosis of portfolio materials, three basic principles must be adhered to:

1. Ensuring the comprehensiveness (completeness) of the assessment: evaluation parameters and criteria are developed on the basis of already existing in the culture of ideas about the portfolio product quality and the participants' creative contribution in the portfolio's creating necessary for evaluation completeness; the more unique portfolio-product is created, the greater will be the participants' own contribution in its creation to the development of evaluation criteria.

2. Reliability in the process of joint activities - the development of the evaluation system (procedures and evaluation criteria) should be built in the process of joint discussion by all parties and participants interested in successful results of using portfolio technology.

3. Continuity (cyclic nature) of activities: joint activity on the evaluation criteria development is cyclically built into two measures of portfolio technology, a test for the creation and use of the portfolio and the assessment of the work itself. In this case, the evaluation criteria development can both accompany each of the two measures, and anticipate them.

The total integrity of the methodological guidelines for developing the portfolio opens up new perspectives: each student can choose a personal "long-term training plan" that is ideally adapted to the learner's habits and represents, in effect, a continuous study of successive modules. Changes can be made during the training, depending on the level of the educational program, the nature of the individual's work activity and the choice of his or her future career (Table 1, Figure 1).

Table 1. Technologies of the portfolio.

<table>
<thead>
<tr>
<th>Target block</th>
<th>Content block</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Tracking the individual student's progress in the educational process, and without direct comparison with the achievements of other students.</td>
<td>Structure: Universal structural components organized as sections that together reflect students’ achievements over a long time period.</td>
</tr>
</tbody>
</table>
| **Passport** | **Basic information about the student (full name, address, languages spoken by the owner, school).**  
**Reflects communication languages in the family, languages that are studied in school and out of it; stay abroad.** |
| **Folio** | **Best works (from the point of view of the student), testifying to his success in mastering languages.** |
| **Biography** | **A table of information about the progress of language learning; what language projects were completed. Assessment of communication skills: listening, speaking, reading, writing using the international six-level scale and its descriptors (carried out by the student and teacher).** |
| **Students’ workbook** | **The content of the studied material, creative tasks within the educational and methodological complex.** |
| **Expert lists** | **Criteria for evaluating of various types of work. In all cases, reliance is** |
placed on key learning skills. Ranking and evaluating certificates of various levels.


Pedagogical conditions: creation of a body for working with the portfolio, maximum expansion of the innovative component of the educational process, complex introduction of the portfolio with other modern practice-oriented project and research educational technologies, appropriate training of teachers, monitoring the effectiveness of the model.

Methods: research, productive teaching methods, self-assessment method (based on the Scottish certificate, "chest of regalia").

Forms: project form (defense of the portfolio at the school conference), form of accounting of the portfolio at the intermediate certification of the student.

Stages: motivational, organizational, activity-based.

Productive unit: the model portfolio is a means of monitoring individual student progress, as is evident:
- the range of application portfolio and its functions;
- the impact on the educational activity and academic motivation of school students;
- high level of demand by participants in the educational process.

Fig. 1. Stages of purposeful self-development of the student's personality.

The technology of working with the portfolio offers a step-by-step implementation of modules, the sequence of activities of the teacher and student within each module represented by the portfolio.

Why have educators turned to teaching portfolios? Supporters debated that portfolios introduce authentic views of learning and teaching over time, offering a more complete and valid pictures of what teachers know and can do. Moreover, they suppose that portfolios contribute professional development by providing teachers with a structure and process for documenting and reflecting on their practice.

Portfolios are exciting as assessment instruments because they allow teachers to represent the complexities and individuality of their teaching in great detail. Ensuring that the evaluation process is guided, and fair requires that several elements be put into place in advance, including identification of sound essence and demonstrate standard for teachers,
specification of the needs for construction of a portfolio, and design of an efficient evaluation system. Teachers create portfolios for a variety of reasons. In teacher education programs, students create portfolios to show their outcome. Later, they may present these portfolios at job interviews [19].

3 Conclusions

The above suggestions have been informed by the extant literature. However, as has been emphasized repeatedly throughout this review, the research (and thus our knowledge) regarding learning portfolios, has been and remains rather limited to date. There is a clear need for further research on the use of learning portfolios in higher education contexts; in particular, more methodologically robust studies triangulating outcomes (as measured by achievement data and demonstrable competencies) with the self-reported attitudes and perceptions of key stakeholders [1],[20]. This may take the form of analyzing learners’ reflective pieces, but observational methods will also be required if the mastery of complex competencies is to be captured. Future studies should also make use of learning analytics generated by portfolio platforms to track use of the tool over an extended period of time. Future research on portfolio use in higher education should also continue to explore ways of reducing the tension between ‘learning’ and ‘assessment’ agenda. Can focusing on the assessment of processes can achieve this, or may it be necessary to separate the two aspects more rigidly? Should learners focus strictly on the ‘learning’ aspect initially, and move on to a more ‘showcase’ style at a later stage?

Finally, given that (i) the current pool of studies on this topic is scattered across many contexts and (ii) many aspects of portfolio use are still quite ill-defined, [21] call to include “measures of implementation fidelity” still seems pertinent. Questions regarding whether different adaptations of the portfolio model are more suitable for certain types of learners or disciplines should also be addressed.

The development and implementation of the language portfolio in the higher school is relevant today, since the main emphasis is put student’s autonomy. The work and analysis of the language portfolio allows both the teacher and the student to see intermediate and final results of their efforts and achievements, which is not possible with the existing assessment system. As an advantage, the existing package of working materials should be noted that the student can use in their future professional work. Into account should be taken that the language portfolio is a student’s passport, which reflects all the student’s achievements and experience, which will be an indicator of his or her effective scientific and educational activities, and from the point of view of methodology it also provides a person-oriented approach to teaching a professional foreign language in a higher school. However, as a drawback a lack of validity and reliability of self-assessment may be named as students sometimes fail to gauge their linguistic competences adequately. Reporting may be a serious challenge and as a result teachers need to have regular assessment in a classroom as well as systematic guidance.

Working with a language portfolio means creating a number of conditions for its successful implementation and introduction into the system of a higher professional education, namely: participation in international scientific and practical conferences, competitions in a foreign language; the need to create conditions for data processing and self-assessment of their knowledge.

Teachers constantly talk about the need to increase the motivation of students, we believe that the language portfolio is an effective tool to solve this problem, since: when working with its results, the student realizes the importance of a foreign language professional competence and the need for its improvement; it provides the learner with the
right to monitor and assess the level of their competences and set goals and objectives for achieving them; contributes to the development of students’ ability to learn a foreign language in the professional domain independently.

**References**


3. J. Lombardi, To portfolio or not to portfolio: Helpful or hyped?, College Teaching, **56 (1)**, 7-10 (2008)


7. A. Moores, M. Parks, Twelve tips for introducing E-Portfolios with undergraduate students, Medical Teacher, **32**, 46-49 (2010)

8. J. Clark, B. Eynon, E-portfolios at 2.0 – Surveying the field, Peer Review, **11 (1)**, 18-23 (2009)


13. D.U. Bolliger, C.E. Shepherd. Student perceptions of ePortfolio integration in online courses, Distance Education, **31 (3)**, 295-314 (2010)

14. A. Alexiou, F. Paraskeva, Inspiring key competencies through the implementation of an ePortfolio for undergraduate students, Procedia – Social and Behavioural Sciences, **197**, 2435-2442 (2015)

15. B. Oliver, Graduate attributes as a focus for institution-wide curriculum renewal: innovations and challenges, Higher Education Research & Development, **32 (3)**, 450-463 (2013)


