GAMIFICATION AND BLENDED LEARNING IN VOCATIONAL TRAINING AND COACHING IN SHORT COURSES

Renata Petrevska Nechkoska
Faculty of Economics-Prilep, "St. Kliment Ohridski" University, Bitola, North Macedonia and Faculty of Economics and Business Administration, Ghent University Belgium,
renata.petrevskanechkoska@ugent.be
Mimoza Bogdanovska Jovanovska
Faculty of Information and Communication Technologies, "St. Kliment Ohridski" University, Bitola, North Macedonia, mimozajovanovska@yahoo.com

Abstract: Vocational training and coaching delivered through short courses and workshops, needs to be as effective as possible due to several reasons: learners (and their employers) invest their time and energy, they expect direct usefulness of the course content and roadmap on how to implement the knowledge into real-life problems, there is certain extent of professional maturity that expects proper balance of theoretical and practical aspects and the outcomes are evident in short time for the benefit of all, or for the worse. These reasons motivated the trainers to use a specific instructional design that embodies gamification, blended learning and coaching for vocational training in short courses for group of participants from Western Balkans countries, with diverse backgrounds, languages, professions, education, personal and collective goals on the topic of preparing successful project proposals for funding, supported by the Western Balkans Alumni Association projects. The specifics in this instructional design have been multifold, compared to traditional training and coaching. One of the novel aspects is the combination of trainers related to the course content of projects funding from various aspects - National Agency expertise, academic, governmental and non-governmental experience, project evaluation and business practitioners. This setting of training facilitated by representative of almost every stakeholder in the higher educational ecosystem and articulated through the curricula of the trainers is aimed to enable overall knowledge apprehension, networking and immediate feedback loops. The incorporation of virtual activities before, during and after the in-person course utilises blended learning mashup of various tools such as e-learning platform for asynchronous communication, social networks for synchronous communication, webinar tool for virtual presence, video tutorials for future reference and expanded dissemination and personal contact for coaching. Another novelty in this approach is in the gamification aspect - introducing scout-game in the forest, using broad range of symbolic matrices - of compasses, maps, planned activities and unplanned events, training of skills and situational awareness, progress mechanics, challenges to achieve teamwork towards outputs and outcomes. And last but not least, the balance of theoretical and practical aspects is achieved by inviting each participant to have own working example and apply the concepts while receiving immediate feedback, or working on collective example - for all of which, follow up coaching is provided. The 'magic' of effective project proposals is complemented with appropriate change management and tactical management. The cognitive and knowledge dimension categories and components have been addressed in their entirety through the extended Bloom taxonomy and the evaluation has been made in formative and summative manner. The learning experience with our instructional design in this pilot instance happens for each participant - on the side of the learners and on the side of the trainers and other HEI stakeholders, including the WBAA - with specific goal to enable emergent effects of networked learners that can put their knowledge, skills and competences in right direction and produce primary and secondary effects for the Western Balkans region and EU.
Keywords: instructional design, gamification, vocational training, blended learning, coaching, virtual exchange

1. INTRODUCTION
Finding common denominators in multidisciplinary and multi-participant world is a challenge that stands alone both in academia and in practice. But, we are standing up to face it for improving the effectiveness of learning, the motivation of the learners, and the overall collaboration environment. In our means on how to achieve blended learning for a regional network of participants (Western Balkans) coming from universities, NGOs, institutions, businesses (Saghafi, 2019), we have worked with the Western Balkans Alumni Association and trainers with national and international backgrounds, along with invited stakeholders from all parts of the HEI ecosystem. We used gamification to achieve content apprehension but also improving the learning of other domains (scouting) while increasing the happiness to perpetuate self-motivation and further dissemination (Pavlus, 2010) (Kapp, 2012). The entire setup is elaborated in the following sections, as work in progress, addressing the methodology, resulting approach and its components, and summary of the findings up to this point.

2. METHODOLOGICAL FOUNDATION

Bridging academia and real life is a continuous process as a result of the efforts of both lecturers and practitioners populating various roles to achieve effective information and collaboration flows. Our instructional design (David Merrill, Drake, Lacy, Pratt, & the ID2 Research Group, 1996), (Wagner, 2011) (Tubb, 2014) that embodies gamification, blended learning and coaching for vocational training in short courses uses the ADDIE model (Kurt, 2017) to conceptualise the course (analysis, design, development, implementation, evaluation) as well as different techniques to apprehend feedback from the diverse stakeholders in the experimental course during its implementation but also for the formative and summative evaluation. We are adding the Action Design Research - ADR (Sein, Henfridsson et.al. 2011) which comes from the information systems as scientific domains "respond to a dual mission: make theoretical contributions and assist in solving the current and anticipated problems of practitioners" (Sein, Henfridsson et.al. 2011) (Petrevska Nechkoska, Angeloska Dichovska, 2019).

In the following sections we will elaborate on the stages through the ADDIE model. The interrelations with the Action Design Research are visible in the design in context and evaluation.

Analysis - A, Design - D, Development - D, Implementation - I, E - Evaluation

Our main preconditions that governed the course effectiveness have been: (i) rich content in terms of diverse sources, aspects and information to be delivered face-to-face (F2F); (ii) diverse (geographic country of origin, professional backgrounds, languages, career stages, higher education system stakeholder, scientific background, vulnerable groups) participant profiles with (iii) common denominator: membership and/or collaboration relationship with the Western Balkans Alumni Association and language: English; and (iv) possibility to sustain the collaboration and the virtual exchange before and after the F2F sessions. The topic in focus would be towards building capabilities for funding applications, entitled: 'The Magic of Creating Successful Project Proposals'.

Relevant parties on the side of trainers need to have the competences: EU funding actions and lines in-depth knowledge and expertise, business projects knowledge and experience, NGO projects knowledge and experience, evaluator knowledge and experience, academic backgrounds, institutional profiles - all embodied in three trainers coming from university from Western Balkans, university from EU, governmental and non-governmental, business and National Agency for European Educational Programmes and Mobility.

Relevant parties on the side of participants needed to come from the broad higher education ecosystem - institutions, ministries, universities, NGOs, businesses, students, vulnerable groups.

This setup paves complicated foundation for diverse expectations and turbulent discussion environment, as well as the risk of not meeting the participant expectations and not achieving the desired training effects.

Objectives and goals for the project that condition the instructional design: The project aimed to accomplish several important outputs and outcomes: training covering the basis for effective project proposals development (the approach, the components, the diversity, the calls, the opportunities) with integration of strategy, tactics and operations; drafted project application form for own/mutual working example, aimed for external funding; compiled set of videos and materials to be placed in the cloud for future reference (in form of repository and tutorial skimmed from the working session).

In terms of outcomes , the project aims have been ambitious and demanding - and will create lines of contribution towards - disseminating and multiplying effects of diverse, empowered, scattered projects and funding efforts; establishment of the collaboration networks around the most active members of the workshop, seeing the power of teamwork even though geographically scattered - still, the collaboration on this proposal has been virtual, exciting and effective; introducing the idea to have crowdfunding of content writers among WBAA members and scope of big ecosystem to collaborate with; introducing the concept of recording the sessions for future reference of all (especially the ones who cannot travel, or for any reason participate in person) and enable virtual exchange across Western Balkans, tracing a path on project ambitions and pragmatism mixed with 'we can do this, if we put our mind to it' behaviour, as a network.

Regarding design, in this instance we are incorporating the principles of practice-inspired and theory-ingrained instruction, reciprocal shaping of the participant and their context, as well as mutually influential roles of the multi-participant landscape (Sein, Henfridsson et.al. 2011), as suggested by the Action Design Research.

As in the other previous referenced cases, these blended learning components represent a fully functional foundation for the virtual exchange (Petrevska Nechkoska, Mojsovska Salamovska, 2017) (Petrevska Nechkoska, Angeloska Dichovska, 2019) consisted of E-platforms and traditional channels:

E-learning platform mainly used for placement of materials and asynchronous, usually one directional lecturer-participants communication; as well as bi-directionally through student assignments, forums and other activities. The project portal contained all instructions and timeline of developments so that every participant (students, managers, teachers) could always orient, revert, check and project own and team actions

(2) Facebook groups have been used for fast, immediate communication where confirmative response was expected

(3) Storage space in the cloud, USB sticks, ...

(4) Polls, collaborative writing and asynchronous remote project work by using the Google Sheets, Forms, Docs, and similar tools.

(5) Skype/Viber served as a synchronous remote team communication and

(6) Free mobile apps/messengers for instant messaging have been used for urgent matters

(7) E-mail correspondence and last but not least

(8) GoToWebinar tool for live streaming and discussion of geographically scattered parties

(9) Workshop training sessions and coaching sessions, as well as the consultations person-to-person, and group/team consultation

(10) Video tutorial

(11) Face-to-Face instruction and networking

The development of the entire instruction, has been in duration of five months, and simultaneously, the implementation activities and communication that needed to go as parallel threads of action, most of the time.

Formative and summative evaluation has been achieved throughout all the stages. In formative sense, using the multimodal communication channels among all the stakeholders (both on the side of trainers and participants) and in summative sense in the stages after completion of the face-to-face workshop and after the coaching and finally applied project proposals with certain use of the online materials. These output points have been useful to orient and evaluate the outcomes.

3. RESULTING APPROACH - INSTRUCTIONAL DESIGN FOR BLENDED LEARNING IN SHORT COURSES USING GAMIFICATION

Our approach has been utilising blended learning possibilities to achieve the regional virtual exchange and in terms of content, it has introduced gamification to pursue and experience the symbolical framework of game content with topic in focus - tactics for project proposals and project management. Here, we are generalising the stages needed to achieve the above-discussed objectives of this instructional design:

Remote, virtual, synchronous and asynchronous - virtual exchange (Moodle, Facebook, Cloud drives and forms, Skype, Mobile apps, eMail, …)

Stage 0: Initiating interest and attracting participants with diverse backgrounds, regions, professions, career stages, expectations, employers, … (in our case Western Balkans Alumni Association members) and trainers that fulfil the necessary competence, experience, employer, scientific/practical background and HEI ecosystem domain

Stage 1: Asking for own working example so that every participant has opportunity to operationalise the guidelines on the site during the workshop and continue home

Stage 2: Establishing virtual exchange and blended learning components - digital platform Moodle to act as repository and referral point, Facebook event and group chat for immediate communication, making the connecting point and keeping the discussion alive, cloud repositories and documents for virtual teams collaboration

Face-to-Face (F2F) workshop and communication

Stage 3: Initial workshop session with extensive input of information (in our case of diverse funding programmes - Horizon 2020, COST action, IPA, Visegrad, InterReg, …) to be able to position own working examples, and choose preferred direction

Stage 4: Extensive introduction by each participant to facilitate connections, common interests and pursuits, ideas on top of ideas

Stage 5: Training on the broad landscape of solutions and extract generic components and call-specific components - in order to be able to align with strategy and invoke sustainability

Stage 6: Gamification for tactics (Figure 1) - the scout game in the forest has been designed to set up a beginning to end scouting challenge, to achieve a goal - completion of required activities and deliverables, to attain an object as a team (part of a 3D heart as item) and individually, to win the lunch. Symbolic matrix of compass and the true North on the map has been connected to funding body priorities, axes; the instructions have been given as the project guide; requirements and obligations as RACI, budget, GANTT chart and final evaluation form as control. The teams have been random and they needed to plan, configure and dynamically reconfigure resources and actions to achieve the goals.

Stage 7: Operationalise with core generic elements - by coaching for each working example by the trainers

Stage 8: Emphasise the 'magical' elements (in our case: alignment with priorities, axes, strategy; dynamic reconfiguration and SIDA&PDCA loop for tactics (Petrevska Nechkoska, 2019(2)) and operations; consortiums,

networks, value co-creation and co-evolution, honesty, integrity, innovation in context, team work, unification of Western Balkans youth profiles, …)

Remote, virtual, synchronous and asynchronous - virtual exchange (Moodle, Facebook, Cloud drives and forms, Skype, Mobile apps, eMail, …) and GoToWebinar and online Video Tutorials to enhance and multiply the effects

Stage 9: Continue virtual paired (networked) work on integrating the learned principles into own examples by consultation, team work and coaching

Stage 10: Expand the audience and multiply the effects with video tutorials (asynchronous distance learning and coaching) and webinars (per specific funding line)

Figure 1: Gamification of tactical management (in projects) with scouting game - components
Source: Authors

4. DISCUSSION AND CONCLUSIONS

Vocational training and coaching delivered through short courses and workshops, needs to be as effective as possible due to several reasons: learners (and their employers) invest their time and energy, they expect direct usefulness of the course content and roadmap on how to implement the knowledge into real-life problems, there is certain extent of professional maturity that expects proper balance of theoretical and practical aspects and the outcomes are evident in short time for the benefit of all, or for the worse. These reasons motivated the trainers to use a specific instructional design that embodies gamification, blended learning and coaching for vocational training in short courses for group of participants from Western Balkans countries, with diverse backgrounds, languages, professions, education, personal and collective goals on the topic of preparing successful project proposals for funding, supported by the Western Balkans Alumni Association projects. The specifics in this instructional design have been multifold, compared to traditional training and coaching. The bridges being built represent novel aspects is the combination of trainers related to the course content of projects funding from various backgrounds - National Agency expertise, academic, governmental and non-governmental experience, project evaluation and business practitioners. This setting of training facilitated by representative of almost every stakeholder in the higher educational ecosystem and articulated through the curricula of the trainers is aimed to enable overall knowledge apprehension, networking and immediate feedback loops. The virtual exchange, achieved by incorporation of virtual activities before, during and after the in-person course utilises blended learning mashup of various tools such as e-learning platform for asynchronous communication, social networks for synchronous communication, webinar tool for virtual presence, video tutorials for future reference and expanded dissemination and personal contact for coaching. The other novelty in this approach is in the gamification aspect - introducing scout-game in the forest, using broad range of symbolic matrices - of compasses, maps, planned activities and unplanned events, training of skills and situational awareness, progress mechanics, challenges to achieve teamwork towards outputs and outcomes. And last but not least, the balance of theoretical and practical aspects has been achieved by coaching participants with their own working example or combine in broader groups to design one; and apply the concepts while receiving immediate feedback - for all of which, follow up coaching is provided. The 'magic' of effective project proposals is complemented with appropriate change management and tactical management. The learning experience with our instructional design in this pilot instance happens for each participant - on the side of the learners and on the side of the trainers and other HEI stakeholders, including the WBAA - with specific goal to enable emergent effects of networked learners that can put their knowledge, skills and competences in right direction and produce primary and secondary effects for the Western Balkans region and EU.

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