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Implementing Innovative Learning Methods: A Two Schools Example

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Abstract

Applying new innovative learning methods in schools can strongly influence and reform them. We questioned ourselves how these innovative educational approaches can reform an urban and a rural school respectively. We selected an urban school, a Model Experimental School and a typical rural High School in Greek countryside. We applied almost the same innovative approaches to both schools inquiring gradually the changes. In the case of the urban school new education methods were applied in order to raise students' interest, while in the case of the Experimental School has to do with its fundamentals and basic principles. Students attending a Model Experimental School are in general willing to take part into educational programs and innovative projects. We detected that the rural school reformed rapidly, achieving gradually some of its pronounced educational goals. Teachers and students developed working groups and organized Astronomical, Environmental events and Drama performances joining thus the rural school with the local society. On the other hand at the Model Experimental School, all these activities regarded as obligatory activities. We concluded that the urban school reformed itself, but not as fast and mainly as crucial as the rural school did.

Introduction

We are witnessing a new social capital where knowledge and learning are the result of cooperation and interaction of people, with master trust among participants, social networks, linkages and partnerships based on the social values of society (Kalantzis & Cope, 2013). "The new learning is reflected in the concepts of transformational, integrative and cooperative education mainly of the Social Gnosticism, of the state

pluralism but also of the principles of reconsideration, cognitive repertoires and synergistic feedback” (Arvanitis, 2013; p.19). It is therefore clear from the above that the issue of us as educators, it is now shifting from the teaching of the subject, in teaching the active subject, where the meta-modernism, i.e. the affirmation and acceptance of pluralism and integration of the personal style, has the total power in learning practice (Kossyvaki, 2003). Furthermore, some dogmatic concepts of objective and indisputable knowledge and the acceptance that knowledge is considered as a social construction adequate under continuous trading, alongside to the circular organization of living systems that self-regulated entities in interaction with the environment, are required to be abandonment (Kossyvaki, 2003; p.44). Schools which purport to stand at the forefront of the education system should at least work pluralist in its choices of educational methods used. As teachers we are called to respond and to rebuild the context of the educational process. The student turns from passive to active receiver underlying learning and teachers must abandon the role of authorities (Kossyvaki, 2003), by developing the necessary skills that will give it the ability to cope with a world that is constantly changing. Additionally, compelling is the need for using alternative forms of education that will offer good education for students who for whatever reason cannot participate in the conventional system of education. Teachers must prepare their students, integrating the life skills that will enable them to recognize and manage a world that is constantly changing.

Practically, how can we organize and reform a rural school? Designing a long period action plan can help a school? How can we implement theoretical predictions into real school environment and evaluate our findings? It is well known that teachers have to participate into educational conferences and courses (Baird et al., 1991). Meetings and courses are crucial for the overall progress and development of teachers (Shannon et al., 1998). New trends in education had to be spread into a rapidly changing world (Tillema, 1994). Modern educators and teachers are expressing a growing demand for lifelong learning programs (Hobson, 2002). Additionally, all new trends must be implemented into classrooms and embodied in the traditional curriculum (Helsby, 1995). In parallel students must accept and incubate modern pedagogical methods (Finn, 1998). Working in groups, consisting working teams, preparing projects and presenting results are some of the new aspects of education. On the other hand, excellence groups (Howley, 1989) and students’ contests (Verhoeff, 1997), seems to gain an important part of nowadays educational system. Furthermore, extroversion of knowledge gradually becomes a goal for many schools (Holland & Andre, 1987). Astronomical and environmental events (generally science courses), cultural

performances (theatre) are of high educational content. But the question is how we can implement all these aspects into daily educational practice.

Implementation

The two schools, on whose actions we rely on to develop our thoughts and with whom we have engaged either as Headmasters/mistress or as teachers, tried to implement a knowledge management program aimed at achieving specific learning outcomes such as the diffusion of knowledge, the improved performance, competitive advantage in a public school and high levels of learning innovation. So through the exploration and implementation of pre-existing knowledge trying to create new knowledge for our students and ourselves, always having in mind that in any educational application, learning as a product of the learning and not just teaching (Lionarakis, 2006). At the same time we took seriously into consideration that learning is not only cognitive development but depends heavily on the feeling, the will, the drive and the *physicality* (Kossyvaki, 2003). The Knowledge management model we rely on in order to design our educational plan for both schools was that proposed by Collison and Parcell (2001), considering three basic knowledge management elements: people, technology and procedures. At the same time we received seriously in consideration the promotion theoreticians' opinions about the crucial role of the schools' culture in every single case i.e. the differences between the culture of the rural and the urban school.

Thus we tried to set the bases for creating schools with teachers and students as an integral part of the *knowledge society*, exploiting creatively knowledge which occurs outside the classroom and implementing the so called *School on cloud*. Schools that are familiarizing students with inquiring, managing and extracting the information, pull down the watertight boundaries of disciplines and interdisciplinary approach knowledge, involving diversity in learning and finally teachers that try to get out of the suffocating confines of Marxist *alienation* of alienation that is the product of his labour. The four axes of the action plans that were formed were:

- the logistical equipment and improvement of building infrastructure,
- teachers training and engaging with new pedagogical data, innovation and research,
- improving teaching instrumentation aimed at developing students skills that will ensure a smooth, balanced and productive path in their integration into society and the labour market in particular and finally,
- evaluation.

In both schools we have mainly problems on rising students' interest, provoke curiosity, but especially in the rural school we have also some disciplinary matters. Both schools wished to develop extroversion and come closer to local communities. According to these major needs in both schools we based on lifelong learning, implementation, group working, production of educational material, extroversion, seminars, educational and cultural events, participation in contests, evaluation and feedback.

Urban School Activities

The goal for improving the education provided includes actions related to the Organization of the school community as community learning, developing educational material relating to the curricula of the new school and the pilot curriculum and designing teaching methods as set out in the institutional framework (Kalantzis & Cope, 2013). Initially the improvement of education in a public school requires in-service training for teachers. The drafting of a questionnaire on the training needs of teachers and the exploitation of the data helped in the planning of training activities under the supervision of School Counsellors and properly design seminars and projects. Furthermore we designed training activities in cooperation with Universities, other educational institutions but also through applying and succeeding an Erasmus+ proposal for Certified In-Service Training Mobility Program for the school staff: The proposal indeed provides a summer school for teachers as an implementation activity.

Additionally, we signed protocols of cooperation and development of partnerships and actions with Universities or other educational institutions while our connection with the local community formed the next long-term goal. In particular the cooperation protocols were signed with the Laboratory of Educational Material and Educational Policy of the Hellenic Open University (HOU), The Laboratory of Research and Mathematics Teaching of the Department of Primary Education (University of Patras), department of Telematics Applications and Regional Development of Computers Technology Institute CTI and Technological Institute (ATEI) of Patras. With all the above institutions have developed actions involving both students and teachers or students and has been planning for the full development of cooperation in the coming years. At the same time is in process the signing of protocols with School of Pedagogical and Technical Education (SPETE), the Laboratory of Sociology, Educational Research and Professional Development of the Department of Educational Sciences and Education in Preschool Age (TEEAPI) and Science Centre of

Patras. At the same time we also formed partnerships with other local and international bodies. The opening of the school in the academic arena but also in society in general resulted in the change of the mentality of educators and further enriching and updating the curriculum.

Regarding the digital school equipment, we pursued potential sponsorships, while significant turned out to be the volunteer work by teachers. As a result of these actions we can refer that our school was equipped with the latest technology machinery and two computer laboratories where each pupil has his computer, the development of excellence clusters of Robotics with four available robots. Furthermore we equipped all classrooms with computers and video projector in well accordance with installation of optical fibre connection and the possibility of developing high speed Internet in every classroom or lab. These were important steps towards upgrading the quality of the learning process and practice while at the same time gave us the ability to design and implement innovative actions. In addition to the adopting of teachers Learning Content Management Systems, which will allow them to create a Web module, was one of the components of the future design of the learning process.

The curriculum of the Pilot Schools (Including Model Experimental Schools) allows educators and teachers to produce educational material utilizing interdisciplinary approach. Indeed until now we configured important educational material that is posted on the website or in our *school in cloud*. Shaping interactive online class from all teachers is the next challenge. It is worth noting that where applied online class or online educational platform the number of visitors was overwhelming. Alongside the order constituted an important part of the curriculum which was implemented this year, another major innovation was the seven clusters (groups) of excellence, innovation and creativity that functioned with the participation of about 150 students (out of 180). In addition, all students and teachers of the school were involved in experiential synthetic work. Pupils and teachers had to remain at school after completion of the course in order to implement these activities. The consistent presence of the students and the almost non-existent, leakage is a positive feedback for our effort but simultaneously creates higher expectations to which we must respond with the unique reward of taking care for our students and their parents. It is important to stress that all these actions and other innovative measures undertaken by individual teachers followed a prescribed procedure dictated by the principles of modern pedagogical-educational movements, as well as specific instructions and instrumental approval of the Scientific Supervisory Committee (EPES).

Finally we must mention the importance of the evaluation process of the action plan and educational work of the school in general. It should be noted here that both the excellence groups and the actions initially involved in the original design their valuation and deliverable material – after their completion-all deliverables, educational tools and results of assessment were filled out. In the final meeting of the Plenary Session of Teachers but also in the Scientific Supervisory Committee (EPES) meeting where the theme of the evaluation of curriculum and the actions of the school year were discussed, we concluded that the process of feedback is very important in order to further proceed into decision-making for the remodelling of the stages of the learning process that did not worked effectively.

Rural School Activities

First of all in order to face the problems we realized that teachers had to be educated and trained on new pedagogical and didactic trends (Day, 1999). Teachers were encouraged to participate to several training and learning activities. During the first stages of our action plan teachers were educated mainly on new education trends, educational scenarios, ICT implementation in classrooms, modern pedagogical trends and new approaches in daily school life. It was clearly understood that traditional pedagogical methods were inefficient. On contrary whenever a new pedagogical method was applied a rising interest was observed. Teachers also appear more willing to test new approaches. As a result of all these activities we realized how important is for educators to attend training activities and programs. New prospective occurred and new methods applied in classrooms. This was the first step of a school that learns, evolves and develops.

Secondly, teachers were encouraged to produce educational content. Educational scenarios were developed, learning materials were produced and working groups organized. We introduced and encouraged a new innovative idea of organizing student groups with special skills and responsibilities (Johnson & Johnson, 1990). For example, the Event Organizing Group, the Promotion Group, the Media (e.g. video) Producing Group, the Drama and Astronomical Team were some of the most active groups. We uploaded most of the produced educational material and scenarios on electronic means (e.g. our website), while the working groups started producing projects and events. A group of teachers was responsible for each working group. They were setting final goals, organizing their working plan, scheduling meetings and evaluating their progress. We tried all steps of the working groups to be based on educational scenarios. This parameter was also an important aspect of a constant

learning school (Schank, 1994). We detected and evaluated all steps, extracting important conclusions of how a school can become a working community. Additionally, the educational material and scenarios seem to encourage students to further search for knowledge. As all this educational materials were available on the web, educators and teachers found additional teaching tools.

Excellence and Contests

A second step to our action plan was excellence, focusing mainly on contests (Bishop, 1991). We realized that participating on National or International Contests was really a unique opportunity to raise the interest and competitiveness of our students. We can refer to the most successful attempt, the *Odysseus Contest*. This contest was about Astronomy and co-evolution of life in space. Winning the contest was not our initial goal; instead we were mainly interested on developing a progressive educational pathway (Jacobson & Wilensky, 2006). First of all we organized a team consisting of almost ten students interested in Astronomy. We scheduled some standard meeting dates, but we met each other mainly out of schedule. Because of the strict school curriculum we had to communicate a lot through electronic means (e.g. Skype). All these state problems and aspects are interesting parameters of how a school learns to work in groups, communicate and develop a project (Garmston & Wellman, 2013). We learned that ICT are absolutely necessary tools for education.

Astronomical Event

Developing our Astronomy project, we realized that we needed some hands on experience, observation knowledge and support by experts. These realizations were important on organizing the first Astronomical event in our school's region open to local community. The event was a result of an excellent collaboration between several working groups, teachers and authorities. The event-organizing group supported the whole action, the promotion group, the media group and astronomical team also took great responsibilities. Teachers from our school participated in several parts of the event, while we had the support of the Municipality of A. Olympia and the 7th Ephorate of Prehistoric and Classical Ancients (EPCA) of A. Olympia. We operated remote telescopes from distance, a professor from University of Patras gave Lecture about the Universe and finally we observed astronomical objects by telescopes. All these activities raised the interest of students and revealed a new orientation in learning procedure for our school. Local communities and authorities came closer to our school and we learned how to expand our audience (Hanifan, 1916). We had now a strong team willing to work harder for our contest project.

From this point and on the final title of our project was clear. We decided to work on plants attitude and colour on another planet. The contest's demand was a clearly defined scientific question, fully developed and answered through experimental and bibliographic justification. Although the difficulties, we managed to win the National part of the contest on March 2013 and the European part of the contest on April 2013. Of course this was the first step of a working methodology. Although it seems that our main goal was the win of the Contest this is not absolutely accurate. We initially tried to intrigue and provoke students to take part to all the related activities. It was the same with the participation of an environmental Contest and also with the drama performances of our school. Furthermore, we realized that extroversion events are extremely important for the educational practice (Elmore, 2007).

Environmental Event

We followed up with an environmental event, which was actually an ecological meeting. This event combined lectures by professors of the University of Patras (another important parameter is growing a standard collaboration with higher education foundations), hands on activities (experimentation related to chemical effects on environment), speeches by market representatives and groups of volunteers. This was also an open event to local community. Apart from this aspect students learned many about connection between education and market especially on the agricultural field (Clark, 1983). Additionally, volunteerism presented to students as a part of environmental protection part (Goldberg, 1998). All these aspects were highly educative for students and local community, while a rural school approaches the day life of local society (mainly agricultural) from many aspects (scientific, economic, activism). On the other hand this was our second extroversion event. Our working groups continued developing and performing even more professional. Doubtless an important parameter of the constant learning school is assigning important responsibilities to students (Ames, 1992).

Innovative Approaches

In parallel we introduced some innovative approaches in every day teaching practice. Real time (synchronous) video conferences were implemented on several lessons (Murphy & Coffin, 2003). An interview from the researcher Michael Tsambas at Lyon France and a couple of virtual visits to CERN were some of our distant learning attempts. Additionally, we increased the use of ICT on daily teaching practice. Whole lesson were presented digitally, while experiments were combined with electronic means e.g. we used augmented reality applications (Kaufmann, 2003) and Kinect

camera for detecting movement and air presenting (Hsu, 2011). In all these actions students' working groups organized almost the whole activities. We realized that students were feeling important in participating actively, while they count the success of the event as their personal success. This is also a remarkable point as we often focused on students with low learning expectations but exceptional technical skills giving them responsible roles on all events Furthermore, we also gained important profits on the disciplinary section. Students felt that a well-organized and extrovert school is not only a matter of strict rules and punishments, but mainly a school that develops healthy relationships between all members (students, teachers, parents, local community).

Conclusions

As far as concerns the Urban School, which is actually a Model Experimental School we can assume that the institutional changes that have occurred in the operation and administration of the school, created the certainty of a positive climate of cooperation and participation in educational matters. A climate that is indeed inherent in public schools, but its development impinges on bureaucratic mechanisms and regulatory frameworks. At the same time the present State Control Mechanisms in Education that transforms educators and teachers into forwarder civil servants, are strongly forced to change form. The latter is not painless or easy, requires a change in the way of facing the concept of *participation*, something that may eventually be dangerous for the system. The possibility of a learning unit to utilize its experience and develop culture of innovation is what matters in a society that is constantly changing, changing us also in parallel. At the same time the implementation of an action plan based on respect of the educational and vocational development targets and the simultaneous creation of mechanisms of communication and collaboration with students and the wider social and educational context, could lead in the near future to transform us into thinking school. We strongly believe in a school that learns from its imperfections, his mistakes and the new comings, but his vision remains a collective creation and constant pursuit.

On the other hand the rural school concluded, according to its action plan, that first of all it is of high importance, schools to organize and plan their actions in long term (Sniehotta et al., 2005). We realized that planning a three or four years plan will be absolutely beneficial for achieving goals and upgrading educational practices. This also reveals that an essential evaluation can only be performed after a long period (3-5 years) of actions and activities. Secondly we confirmed the importance of lifelong

training for teachers and educators. Doubtless, participating in educational seminars, conferences and training meetings allow teachers to be always informed about new educational trends (Day, 1999). Implementing all these compulsory methods in classrooms turns out to be extremely positive for students. Furthermore, organizing extroversion events by entrusting critical responsibilities to students was also one of our positive remarks (Elmore, 2007). We observed that all these events joined teachers, students and local community together. Science and culture came closer to students and local society, while the interest of students rose remarkable. All these events include the element of collaboration and cooperation between several partners and promote our basic goal of knowledge diffusion. Additionally, participation in contests is another crucial parameter (Bishop, 1991). Healthy competitiveness between students and schools can only offer benefits to all participants. Winning a contest is not the key. We are mainly interested in the whole progress and steps of contest. We wish students to take part, work, and search, compose papers and support publicly their projects. Of course a won contest satisfies students and encourage them for new tries. Another remarkable conclusion is the importance of educational scenarios, material and content (Jacobson & Wilensky, 2006). All these produced objects are really useful for planning and orienting bigger action plans. Furthermore if all these educational objects are uploaded in websites, everyone can easily access and use them. Finally, we can claim that each step was an evaluated progress of a previous one, helping us to achieve goals and milestones. This is how a school learns by itself and by others.

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Closing the “Learning Design Life-Cycle” with the Pedagogical Planner

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Best Research Paper Award Winner

Abstract

In the last few years, a number of approaches and tools have been proposed in the Learning Design (LD) research area, with the aim to support teachers in the complex process of conceiving and planning innovative educational activities. Most of the available tools support one or two stages of the whole learning design cycle and this has caused a certain variety of the available tools. Even if some researchers suggest such variety is positive, as teachers are free to pick up from the shell tools depending on the specific needs, others claim that this is too much disorienting, especially for those teachers who are not familiar with the LD field. To contribute to this still open discussion, we have developed a tool, able to cover the whole learning design cycle and have started studying its impact on teachers' LD practices. The paper illustrates such a tool, called Pedagogical Planner (PP), which is able to support the three main phases of the learning design cycle, namely Conceptualization, Authoring and Implementation. The PP so far has been used by teachers to support innovative educational interventions in the field of intangible cultural heritage education and has proved to present a number of advantages and innovative aspects in respect to other existing tools, which are discussed in the paper.

Abstract in Italian

Negli ultimi anni nel settore di ricerca del Learning Design (LD), sono stati proposti diversi metodi e strumenti, con l'obiettivo di supportare i docenti nel complesso compito di ideare e pianificare attività educative innovative. La maggior parte degli strumenti oggi a disposizione supportano una o due fasi del ciclo di vita del learning design e questo causa una certa varietà negli strumenti a disposizione. Mentre alcuni ricercatori vedono tale varietà come positiva, poiché consente ai docenti di scegliere liberamente quali strumenti utilizzare a seconda delle

specifiche esigenze, altri lamentano che questo possa risultare disorientante, specialmente per quei docenti che non sono esperti del learning design. Per contribuire a questa discussione ancora aperta, è stato sviluppato uno strumento, capace di coprire l'intero ciclo di vita del LD, per studiare l'impatto che questo ha sulle pratiche di progettazione dei docenti. L'articolo descrive lo strumento, chiamato Pedagogical Planner (PP), che supporta appunto le tre fasi principali del ciclo di vita del LD, cioè: la Concettualizzazione, la Pianificazione e l'Implementazione. Il PP al momento è stato usato da dei docenti nell'ambito di interventi educativi nel campo del patrimonio culturale intangibile ed ha mostrato una serie di vantaggi rispetto agli strumenti esistenti, che vengono discussi nell'articolo.

Keywords: learning design, intangible cultural heritage, pedagogical planning, conceptualization, authoring, implementation.

Introduction and Background

One of the main aims of the learning design research field (LD) is to provide teachers and educators with methods and tools able to support them in the delicate phases of (re-)designing and planning innovative educational activities. This should address the evident and urgent need of innovating the educational systems. The field has been quite active in the past few decades, with researchers striving to find effective ways to support teachers for the complex task of conceiving teaching and learning activities that can be enacted, shared and repurposed (Conole, 2012; Mor & Craft, 2012; Persico & Pozzi, 2015).

Through the years, researchers have proposed and tested a range of different methods and technological tools, with different aims and with varying degrees of success (Prieto et al., 2013a; Persico et al., 2013): for example, some tools are more oriented to support pedagogical reflection, others are aimed to foster teachers' creativity in conceiving new educational solutions, others are used to make teachers' design knowledge explicit (and thus potentially sharable and reusable), along the whole process of going from design ideas to delivery (Muñoz-Cristóbal et al., 2012; Earp et al., 2013; Pozzi et al., 2015a; Persico & Pozzi, 2015).

Clearly, there is not a unique way for going from teachers' abstract learning design ideas to their delivery with actual students; on the contrary, the learning design process is quite complex in nature, at some stage it is systematic, at others it is creative and in any case it is hardly reducible to a number of predefined steps (Winograd, 1996;

Masterman et al., 2013). This has basically caused the variety of tools that are presently available.

Just to provide some examples, among the tools aimed to support the conceptualization of new activities, we can mention the Course Map (Conole, 2012), the 4SPPIces approach (Pérez-Sanagustín et al., 2012), the 4Ts model (Pozzi & Persico, 2013), Persona Cards (Chacón-Perez et al., 2015), etc. Among the tools aimed to author the design, we can mention WebCollage (Villasclaras-Fernández et al., 2013), CADMOS (Katsamani & Retalis, 2012), OpenGLM, (De Liddo et al., 2011), LAMS (Dalziel, 2003), CeLS (Ronen et al., 2006), etc. A more exhaustive overview of the existing tools, along with a discussion about their main characteristics, can be found in Prieto et al. (2013a). In this same work, the same authors claim the field is too much fragmented.

In front of such variety, some researchers suggest to take advantage of this richness, by using various tools, instead of striving to find one single tool that fits for all purposes (Mor, Craft, & Maina, 2015; Masterman & Manton, 2011). In our recent experience, instead, especially developed within the METIS project (www.metis-project.org) (funded under the LLP Programme), this runs the risk to disorient teachers, especially if they are novice to the LD field.

As opposed to this position, other researchers (Pozzi et al., 2015b) suggest to provide ‘unique, tools’, each one being able to support the whole design life-cycle, starting from the first steps of conceptualizing the design idea (defining the learning objectives, identifying the contents to be addressed and choosing the most adequate pedagogical strategies), down to planning the flow of activities, associating the educational resources and tools to be used by students, and finally delivering the resulting design (being it a single activity or a whole course) to students through a Learning Management System (LMS).

In order to contribute to the LD field, the present paper illustrates a tool, which is called “Pedagogical Planner (PP)” (Bottino et al., 2008). One of the main assets of the PP (and its distinctive feature in respect to all the other tools) is its ability to support – alone – the whole design cycle, in such a way that it allows a smoother and more organic design approach. This makes the PP unique in the LD research field, as it bridges and integrates all the main phases of the design process.

In this paper, one particular instance of the PP is described, as it has been proposed within the i-Treasures project (Ott et al., 2015). The tool has been used by designers of innovative educational interventions in the field of intangible cultural heritage education; after illustrating the tool, the paper provides preliminary data coming from experience of use within the project, thus showing strong points and weaknesses of the PP and paving the way for further work in the field.

Context of the Study

As already mentioned, the instance of the Pedagogical Planner (PP) described in this paper has been proposed and tested within the i-Treasures project (funded under the FP7). The project is about fostering innovation in the field of intangible cultural heritage education, i.e. creating conditions for supporting the “passing down” of rare and traditional artistic expressions (such as traditional dancing, singing, etc.) to new generations through the use of technologies. Thus, i-Treasures represents a genuine novelty in a field where educational practices are usually not yet well consolidated (Ott & Pozzi, 2011) and where technologies definitely represent a disruptive innovation (Ott et al., 2015). An exhaustive description of the project is out of the scope of this paper; here it is enough to underline that in such context, there is obviously a serious need of pedagogical reflections and the learning design phase is essential to make the most of the available cutting-edge technologies, especially because most of them have never been used in these domains (Ott et al., 2015).

Teachers in i-Treasures need to be supported at the different stages of the design process and to reflect on the various elements at play and on the interactions between them, so as to ensure that these form a coherent, manageable whole that responds effectively to learners’ needs – insofar as this can be determined a priori (Jonassen et al., 1997). For this reason, within the project, the Pedagogical Planner has been proposed, with the aim to support the teachers/ designers of pilot teaching/learning experiences in the various intangible cultural heritage domains addressed.

The Pedagogical Planner refers to the Learning Design Life-cycle model, described in Asensio-Pérez et al. (2014) that is based on three main phases: Conceptualization, Authoring and Implementation.

During the Conceptualization phase, educators make a rough design, define the learning objectives to be reached, the contents to be addressed, and consider the target population and the context. As to the Authoring phase, detailed activities are planned and their flow fixed; besides, teachers need to associate to each activity the related

educational resources, etc. As a final stage, during Implementation, courses in a Learning Management System (LMS) are created, according to the design done in the previous phases.

In the following, the paper illustrates how the PP is able to support the three phases of the cycle.

Conceptualizing, Authoring and Delivering with the Pedagogical Planner

In this section, the Pedagogical Planner (PP) is described, as it has been proposed and used within the i-Treasures project.

The PP is a scalable cross-browser web-based application developed in PHP, MySQL and JavaScript. As already mentioned, it is intended to cover the three learning design phases. Consequently, the tool can be conceptually seen as subdivided into three areas:

1. the Conceptualization area;
2. the Authoring area;
3. the Implementation area (which takes the form of the LMS).

In the Conceptualization area (Figure 1), the designer is guided through the definition of a number of aspects, namely:

- the target *Population*: here the designer can reflect and then make it explicit the main characteristic of the population, their age, their pre-requisites (if any), etc.;
- the learning *Context*: here the designer can define the learning situation/environment where the educational intervention will be carried out. In particular, type of context, constraints (if any), timing and setting;
- the *Content domain*: the designer defines the main aim of the intervention and can build a map of the content to be addressed (see Figure 1);
- the *Objectives and Metrics*: here the designer is supported in defining the main learning goals the intervention is meant to reach, plus the criteria to monitor and evaluate the teaching/learning process (during and after the enactment);
- the *Tools*: here the designer can tentatively define the innovative tools and the features s/he is planning to use during the enactment phase with learners.

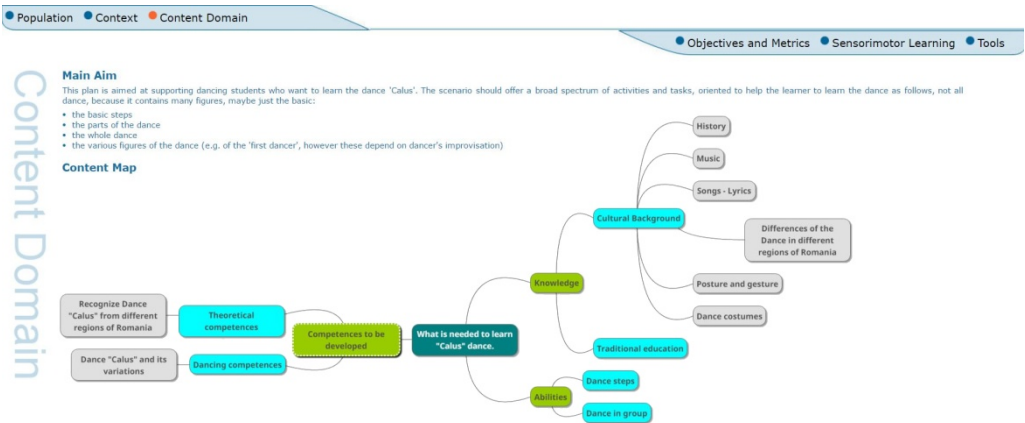


Figure 1. The Conceptualization area – Content map

In the Conceptualization area, textual fields are available, but also content maps can be used (see Figure 1), as this is the most creative stage of the LD process, where these kinds of diagrams might help. In this area of the tool, as in any other area, no field is mandatory and everything can be compiled partially and with no pre-defined order: this is to guarantee a total flexibility to the learning design process, as teachers should be free to use the parts of the tool they mostly need; at the same time, in case the teacher is a novice designer, s/he can follow the suggested structure of the PP, thus being guided in the process.

In the Authoring area of the PP (see Figure 2), the designer is supported in the definition of the activity flow, i.e. the sequence of activities to be proposed to learners (left side of Figure 2), which should then lead them to reach the learning objectives.

Each activity is specified in terms of: Objectives (where specific learning objectives of the single activities are defined); Orchestration (where the required setting is described and the instructions for students are provided); Tools and Resources (educational resources and tools to be used by learners during the enactment phase are provided); Evaluation Criteria (criteria to be adopted in order to evaluate the effectiveness of the activity are defined) (see right side of Figure 2).

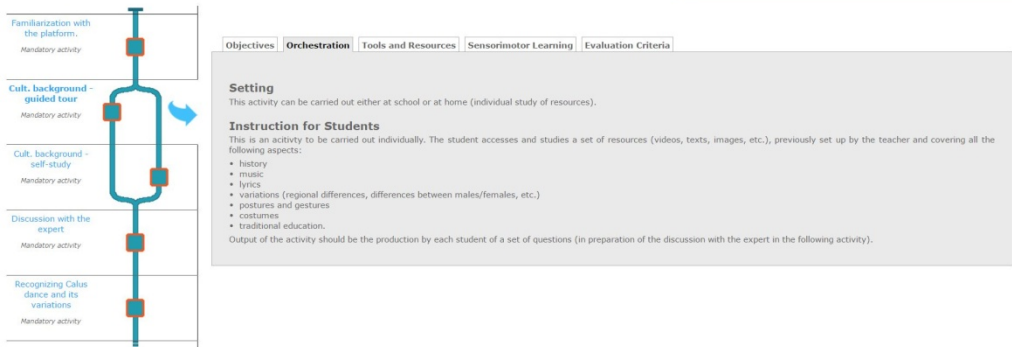







Figure 2. The Authoring area

In the PP, in addition to fashioning a simple step-by-step sequence for (all) learners to follow, the designer can also introduce different kinds of variation and these are represented graphically in the flow chart: authors can designate individual activities as mandatory or optional, and can indicate whether the order in which certain activities are to be tackled will be up to learners. They can also design flows with branching (multiple pathways) in cases where the plan is to include a certain degree of personalization, e.g. by proposing different activities to different learners (or groups of learners) who are ultimately pursuing the same overall learning objectives (see Table 1 containing the main activity options in the PP).

Once the Conceptualization and the Authoring phases are completed, the PP is ready to support the Implementation phase (button “Send to the LMS” in Figure 1), i.e. the automatic configuration of the LMS. In i-Treasures the LMS adopted is Chamilo (<https://chamilo.org>): once the first two design phases are done, all the design knowledge contained in the PP is automatically migrated into Chamilo, where a new course is created, which contains all the basic information about the educational intervention (objectives, contents, etc.), as well as the activity flow, already filled in with the educational resources and tools provided by the designer in the previous phases (see Figure 3).

Table 1: Main activity sequencing options in the PP

Activity sequence options	Representations
<p>Single activity The simplest option. This is to be designated either as mandatory (square symbol) or optional (diamond).</p>	
<p>Ordered sequence of activities Two or more activities that are placed in a sequence, which learners are to carry out in the specified order. There is no limit to the number of activities the designer can add.</p>	
<p>Non-ordered sequence of activities (cloud) The same as above, but in this case no sequencing is imposed. Consequently, learners will be free to choose in what order they wish to tackle these activities. Graphically these are clustered together in a cloud. There is no limit to the number of activities the designer can add.</p>	
<p>Path branching This option allows the designer to split the activity flow into two (or more) separate threads that propose different activities but nevertheless lead towards the same overarching learning objective. Learners will be free to choose which path they wish to take.</p>	
<p>Group branching The same as above, except that the purpose for the branching is to assign specific sub-groups of learners to the respective threads, thus allowing the designer to run differentiated, group-based learning.</p>	

The screenshot shows the Chamilo LMS interface. On the left, a user profile is visible with a 6% progress indicator. Below it, a sidebar lists course content under 'Cultural Background', including 'Cultural background - guided tour', 'Before you Start', 'Tsamiko', 'images', 'Cultural background - self study', and 'Cultural background - test'. The main content area is titled 'Tsamiko' and features a lesson titled 'GREEKS FIRST RELATING TO DANCE'. A menu on the left lists various topics related to Greek dance, with 'Greeks first relating to dance' selected. The main text explains that Greeks since their early years were directly related to dance, and their metaphysical distress was cured by religion, manifested by hymns, worship dances, and ceremonies. It also mentions that the marriage was accompanied with dance and music, and that the funeral ceremony was accompanied with music and lamentations. Below the text are three images: a drawing of a dance lesson, a vase painting of a god Pan and a Maenad dancing, and a dancer with a krotala, flute case, and walking stick. A video player is also visible at the bottom right of the content area.

Figure 3. Implementation in Chamilo (LMS)

From a technical point of view, in order to allow the migration from the PP to the LMS, once the design is ready, an XML is produced. The XML document, conveniently encrypted, is then sent through a POST form to the LMS, which elaborates the request and use the received information to create and properly populate a new course in Chamilo.

Discussion and Conclusions

So far, the PP has been used by the teachers involved in the i-Treasures project, to conceptualize, author and implement pilot innovative interventions in various intangible cultural heritage contexts, and addressing a variety of different populations having different backgrounds, interests and potentialities.

During the experience, we have collected qualitative feedback from the teachers/users, thanks to a continuous dialogue with them during actual use, as well as through final individual interviews. The teachers have been positive regarding both ease of use and usefulness of the PP.

The tool has proven to adequately support the three main phases of the learning design process, thus providing full coverage of the whole learning design cycle. This is an innovative feature in the Technology Enhanced Learning field; even if other tools exist, usually these are able to bridge Authoring and Implementation (i.e. Prieto et al.,

2013a) rather than Conceptualization, and managing the whole cycle within one single tool, remains – to our knowledge – a novelty.

Furthermore, the PP offers other advantages, in respect to the other existing tools: for example, it allows multiple forms of representations of the design knowledge (textual representations, as well as graphical representations, such as the content map and the activity flow); representations in the LD field are one of the most debated topic and allowing multiple representations, is certainly an asset of the PP (Pozzi et al., 2015a), which enhances its flexibility.

Flexibility, which is one of the most advocated requirements for LD tools (Masterman et al., 2013), is also achieved by allowing partial usage of the tool (nothing is mandatory) and allowing to jump from one section to the other. At the same time, if teachers need guidance, they can follow the embedded structure of the tool. From this point of view, the PP can be a good candidate in teacher training contexts, where teachers often need to be supported in re-designing and/or re-planning their traditional teaching/learning activities.

Regarding the Conceptualization function, the PP embeds a ‘neutral’ pedagogical approach, i.e. it can be used to design any activity, independently on the intended pedagogical models behind it; it thus well fits the need for differentiating educational interventions, by offering not only a variety of different contents, but also by envisaging the adoption of different educational approaches, strategies and methods. This “neutral” approach is different from the one adopted by other tools, such as for example the 4Ts (Pozzi & Persico, 2013) or the 4SPPIces (Pérez-Sanagustín et al., 2012), which are exclusively intended to support the design of collaborative or problem-based learning activities respectively.

Furthermore, the PP has proved to be particularly easy to use, which is one of the most critical aspects often raised by teachers in similar experiences. For example, it has been recognized that the tool does not require any particular technological skills from the teacher to manage both the Authoring, as well as the Implementation phase, which in other tools are far more complex and require high digital skills.

The ability of the tool to support the design of learning paths together with their “multiple variations” to accommodate differences in the target population needs, has clearly emerged from the initial testing in the field of cultural heritage and suggests

that the PP can be seen as a suitable tool for fostering personalization of learning interventions (Meyer et al., 2006).

Regarding the present drawback of the tool, we must acknowledge that the LMS used in i-Treasures for Implementation (i.e. Chamilo) is very user-friendly, but for sure this is not the most popular LMS and this makes the PP not very much transferrable to other contexts, at least as far as Implementation is concerned. Nonetheless, this experience has proven the feasibility of the approach and it is already in the developers' plans to develop the Implementation functions using other LMS (such as for example Moodle). As a matter of fact, experimentations in this direction have already started and other data will be soon made available to the scientific community.

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When Innovative Learning Designs are too Innovative: Creating Relations in Chaosmos

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Best Research Paper Award Winner

Abstract

This article presents a study of what happens when the innovative ideas behind a new learning design may be too innovative. The article analysis an implementation process of a new learning design in Nurse Education. The intention with the new learning design was to move away from a *functionalist* approach to teaching and it was developed to motivate and encourage the students to engage in more *situated* and self-regulated learning processes. The investigated course was infamous for low attendance and for unmotivated students. The new leaning design utilised teacher-produced video-clips, role-play and open supervision to qualify the students learning process while they were preparing for the lessons but also during the lessons. The new pedagogical activities were designed to make the learning process more situated and less rigours, thus demanding of the students to develop skills as self-regulated learners who, in turn, would be able to create relations between video content and lesson activities, while forming a *chaosmos*. The video-clips should also scaffold the academic reading during preparation with video-clips. However, the outcome was not as planned. The students did not recognise the video-clips as a significant part of the preparation for the lessons and therefore they were not prepared for the activities that the teacher had planned for the lessons. The article analyses and interprets the students' missing relations between content, activities and their roles as learners. The article suggests an iterative, spiralic process to develop *schemata* and relations to learn in a situated learning environment while forming as *chaosmos* and developing as self-regulated learners.

Keywords: preparation for lessons, chaosmos, schema, self-regulated learning, scaffolding

Introduction

The context of this article is demotivated students at Nurse Education in a course regarded as less relevant by the students. The aim of this article is to provide a philosophical framework for understanding why the students experienced a learning design to be confusing, when the learning design was actually designed to better the situation. Our philosophical framework, our lens, for looking at and understanding the learning design is divided into three perspectives:

- Creating awareness of the students' own level of self-regulatedness;
- Creating awareness of possible relations between what appears to be chaotic elements, while forming a chaosmos;
- Creating a shared understanding of needed schemas for understanding the learning design and for learning in the new learning design.

The three perspectives should help us understand a learning design where teachers and students navigate a chaosmos leading the students to learn in less rigorous context while creating their own strategies for learning in the specific context.

Before we go into details with the framework we will introduce the context in which the new learning design was applied.

About the Context

The context is the implementation process of a new learning design in Nurse Education. The intention with the new learning design was to utilise the students' preparation time between lessons for the students to familiarise themselves with the academic content and consequently to use the time during lessons for more dialogical activities to provide circumstances for deeper learning.

The development and implementation of the learning design is based on the work of Lukassen, Pedersen, Nielsen, Wahl, Sorensen and Kjærgaard presented in these papers (Lukassen, Pedersen, Nielsen, Wahl, & Sorensen, 2014; Wahl, Pedersen, Nielsen, Lukassen, & Kjærgaard, 2015).

The empiric data notes from the initial study (Lukassen et al., 2014) show that the students are generally motivated by content and activities that seem (directly) applicable in their future profession and, conversely, less motivated to engage in academic activities that they regard as being on the periphery of nursing practice. In that sense they share traits with the students in Huffman and Huffman's study of *study*

skills (Huffman & Huffman, 2012). Huffman and Huffman find that the students tend to use the technology that is deemed *useful* either for passing class or for their future practice. Technology that does not directly contribute to passing exams or future practice is thus regarded as irrelevant, which indicates that it is not just a local phenomenon at Nurse Education at UCN. The course, to which the learning design was implemented was a course on “Organization, administration and management” (6th semester, programme for Nursing at UCN) that suffered from low attendance and mediocre evaluations. The students generally regard the course as digressing into areas of low immediate interest to them. Furthermore, it seems as if the students did not regard the course as a part of their professional identity formation process, which may also be the reason for the low attendance and low motivation.

The course is an appendicle part of a module that focuses on acute and critical illness. The students think of the two parts of the module as incoherent and contrasting in the sense that acute and critical illness is regarded to be at the core of their budding nursing identity and organization, administration and management is more in the periphery of nursing. The teachers at Nurse Education claim that the course on organization, administration and management could profit from a placement later in the programme, however it is not within the power of this study to reorganise the whole programme. The reason why the nurse teachers suggest placing the course later in the programme is that by that time the students have experienced the need for knowledge on organization, administration and management during their internship. Therefore, there are two organisational issues, beyond our control, that affect the results in this study; the academic context of the course and the placement in the progression of the programme. Organization, administration and management is a growing part of the obligations of a nurse, however the teachers at Nurse Education explain that it is not regarded as a part of the nurse’s core identity amongst most students. In order to overcome these challenges the teacher and her action research group have developed a learning design that is less functionalist and more situated. The aim is to steer away from a teleological *means-ends* logic and move in the direction of a more deontological causal logic. The learning design was an attempt to bridge between functionalism (Welch, 1985) and situated learning (Lave & Wenger, 1991).

Research Design

In this article we analyse and evaluate the implementation of the learning design and its implications through a critical realist lens. This means that we ask the ontological

question: “if this knowledge is obtainable of the world, what world is it then?”. That is a reciprocal relation to the epistemological question; how is knowledge of the world possible (Bhaskar, 2008; Collier, 1994; Corson, 1991; Elder-Vass, 2007).

This means that we investigate our data retroductively, in the sense that we look back to recreate the circumstance that made the event possible. Thus, we study the causal mechanisms that cause the events that we see in reality (Peirce, 1998). Our analysis of the learning design becomes similar to the work of a detective in the sense that we seek to recreate the traces and evidences for the emerging of the event in order to suggest which actors and mechanisms may have caused the event (McEvoy & Richards, 2003). The purpose of using a critical realist approach is that we want to look beyond the immediately visible facts and concentrate on what might have caused the visible facts in the *event* and thus lay bare possible false representations.

The learning design that generated the *event* for the critical realist investigation in this study was developed in an action research cycle. The cycle was a quest for emancipation through inquiry and reflection (Adelman, 1993; Lewin, 1946). We started the cycle by identifying and pinpointing the problems (lack of motivation, exclusion and idle ICT) that were common, tacit knowledge amongst the nursing teachers but not articulated. Then we developed a learning design that might improve motivation and enhance the use of ICT. This resulted in a redefinition of the relay between preparation and lesson. It was inspired by *flipped classroom* studies in other nursing colleges (Schwartz, 2014) and the more general notion of utilizing video instead of face-to-face lecturing. The reason behind this was that the students said (in a preliminary survey) that they experienced more acknowledgment of learning from supervision than from lecturing. The aim was to create a situated learning environment where the students would be motivated by collaborating on the activities and not only by the risk of failing exam (Lave & Wenger, 1991). The activities included; role-playing, teacher-produced video-clips, real life cases etc. The learning design eliminated all face-to-face lectures instead, the presentation of academic content was done through teacher-produced videos. These videos were supposed to support the students' preparation for lessons in conjunction with reading and other activities.

The learning design was created on the basis, interviews, focus groups and observations. The data collection should investigate how the new learning design worked in practice. We analysed the data and realised that there were major issues with the new learning design (Lukassen et al., 2014). For the second run of the course,

the teacher made a few adjustments to the learning design and the data showed that some of the issues were dealt with. Finally, the results of the study could be concluded and they were:

1. An island of *situatedness* (the course) in a sea of functionalism (the programme in general) requires a lot of explanation and attention;
2. The students need time to figure out how to learn in a situated, learner centred context;
3. The students need guidance to learn how to centre themselves in their own learning process.

Based on these concluding comments on the learning design, the critical realist investigation begins. We re-visited the field notes, focus groups interviews and surveys in order to generate a deeper understanding of why the learning design was not an immediate success.

The Philosophical Framework – Three Perspectives

Before we go into details with the framework, we will introduce each component separate. First, we introduce self-regulated learning as an important skillset for students to navigate the learning design, then we introduce chaosmos for understanding the nature of the learning design and lastly we will introduce schemas as a way understand the learning activities in the chaosmos.

Self-Regulated Learning

Parts of the learning design required the students to preparing for lessons or work with exercises on their own or in groups. Being on their own both before and after lessons require students to take control over their own learning process. Pintrich (2000; p.453) defines self-regulated learning as “an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features in the environment.” Zimmerman (2000; 2002) divides the process of self-regulated learning into three phases: the (a) Forethought Phase where the learner set expectations, set goals and planes the process, the (b) Performance Phase there the learner will self-instruct and monitor the process, and the (c) Self-reflection Phase where the learner will self-evaluate the process. The cyclical characteristics of the model means that learning always builds on top of prior learning. The learners

expectations constructed in the Forethought Phase build on prior experiences formed in the Self-reflection Phase.

A recent study in student's self-regulated learning and metacognitive skills shows that online and on-campus students relies on and find different learning strategies and metacognitive strategies important. In the study, online students indicate that skills like planning, controlling and evaluation are important for distance learning; while on-campus students stated that lack of self-discipline and limited communication skills are barriers to distance learning (Barak, Hussein-Farraj, & Dori, 2016). This indicates the importance that the students can apply different learning strategies to different learning designs. One (the teacher) cannot expect the students to switch from one self-regulated mode into another when a new learning design is applied.

Chaosmos

The Chaosmos is a notion developed by Deleuze and Guattari (1994; p.201), it is based on James Joyce's idea from "Finnegans Wake" that chaos and cosmos are not opposites by rather two points on a continuum.

[...] as Joyce says, a chaosmos, a composed chaos--neither foreseen nor preconceived. (Deleuze & Guattari, 1994; p.204)

Deleuze and Guattari, through Joyce, describe art as composed chaos. The outer perimeter of chaos is guided by what Deleuze and Guattari call "the plane of immanence". The *plane of immanence* is a way of describing a reality, which a group or an individual realises as his/her shared repertoire of experience, actions, narratives, possibilities that help them form meaningful relations between, otherwise, chaotic elements (Deleuze & Guattari, 1994; p.36).

In this context, the notion of chaosmos is used to put into words what the students may have lacked in the implemented process of the new learning design. The chaosmos is the force of chaos creates difference (Beaulieu, 2016). That is, when the student's process of creating relations between chaotic emergencies (the activities in the new learning design) leads the student in new constructive and creative directions. The chaosmos also relates to the dialectics of *being* and *becoming*. The chaosmos refers to a state of *becoming* rather than a state of *being*. The state of being would refer to *cosmos*, while the state of neither becoming nor being would refer to chaos in a Deleuzian/Guattarian understanding of the terms (Beaulieu, 2016). The situation of neither *being* nor *becoming* is referring to a situation of a *self* that appears vaguely

defined and the prospect of the *self* developing a more explicit definition is not evident.

Lack of Schemata

We use the Kantian notion of *Schema* to understand what is needed to learn in new circumstances (Radford, 2005; p.219). In this paper, we use Kant's three types of *schema*: empirical, pure sense and transcendental schema. Generally, the notion of *schema* is a cognitive framework for understanding and interpreting information. It is related to language through metaphors and stereotypes in what Lakoff and Johnson would call "image schemas" (Lakoff, 1990; Lakoff & Johnson, 2008). Furthermore, it is related to "shared repertoire" in Wenger and Lave's theory on "Communities of Practice" (Wenger, 1998).

The schema describes the cognitive competence to interpret information: In language; through metaphors, in behaviour; through stereotypes and in collaboration; through "shared repertoires". The Kantian tripartition of the schema divides the schema into; empirical, sensuous and transcendent schemata (Johnson, 2005).

An empirical schema is an empirical concept that many perceive in similar way.

A pure sensuous schema describes the ability to think systematic abstract thoughts of concrete matter. It describes the abstract system of understanding the invisible complexity of things that appear simple (geometry: triangle, circle).

Pure concepts of understanding are referring to schemas coming from within and affecting understanding of what is experienced. Intuition for example.

The schema is a diagram for understanding the organisation of the event. In this case the teacher's schema is somewhat expressed in the syllabus and the actual experience of learning is the sense experience. The schema expressed in the syllabus is at best an empirical concept.

"Formal deduction removed from all empirical content, however, Kant argued, cannot yield knowledge. The question then was to explain how abstract concepts relate to their concrete content. In an important sense, the Critique of Pure Reason is an attempt to achieve this goal and the schema, in fact, was Kant's answer." (Radford, 2005).

The syllabus is an abstract concept created through the teacher's deduction of prior experiences in relation to the outcome of new circles of reflection. In the sense that the teacher reasoned:

Priming an academic subject to the students is important, letting students watch a video before lectures will *prime* the students memory and make room for more motivating activities what seems more meaningful to the students.

This deductive approach to reasoning was, unintendedly, used by the teachers while designing the learning design. The design process was *passive* so to speak, it did not involve empiric experience it was solely build on the theoretical deduction of an alleged relation between video, role-playing and motivation. Even though the syllabus gave instructions of how to use the videos, it does not say anything about why. So, the students didn't have a clear idea of what purpose the videos served? The students were used to reading syllabuses and they had a fixed impression of what teaching meant, so when bearing elements are changed, the students prior schema does not seem to fit the new design.

Scaffolding Schema through Chaosmos

We suggest a scaffolding structure for gaining both self-regulatedness and schema. The need for scaffolding the students learning process became evident we analysed the empiric data produced in the implementations process (see section below). The notion of combining scaffolding and schema is derived from the work of Aída Walqui (Walqui, 2006).

Framework

In the bottom of the framework the individual elements (the coins) represent individual learning activities in the learning design. They are of course part of the learning design or the curriculum but at the same time, they are independent in the chaosmos, here represented by the middle layer. Students navigate the chaosmos engaging in activities. The top layer represent the common schema of the learning design helping students (and teachers) navigate the learning design though the chaosmos. What holds it all together is Self-regulated Learning here represented by the outermost cylinder (Figure 1).

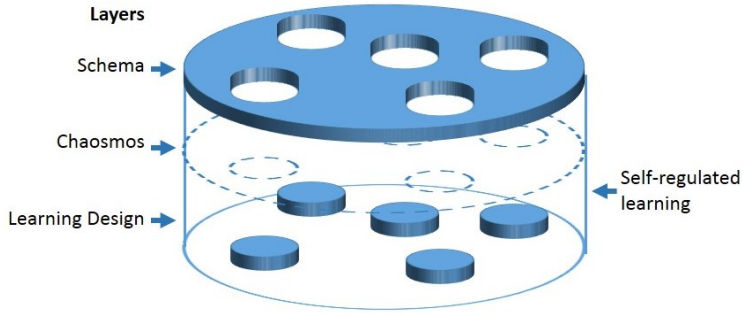


Figure 1. Philosophical framework

Three perspectives on Learning Design; Schema, Chaosmos and Self-regulated Learning. (The model (Figure 1) was developed for this article).

Analysis

The Critical Realist approach to analysing the context relies on an assumption that what we see might be a sort of a false representation.

This *passive* approach to developing learning designs might be the causal mechanism that triggered the displacement between the teachers expectations of how the students would engage in learning within the new learning design and how the students actually reacted in the real *event*, the lesson. In Louis Radford's article "The Semiotics of Schema" (Radford, 2005) the schema is described as a vehicle for understanding that requires active interaction between information and the learner:

"The schema entails of an individual who, to acquire knowledge, has to become active" (Radford, 2005; p.147).

The schema is like a catalyst in chemistry. A substance that makes the process happen in a certain way without actually including itself in the process.

"...in Kant's theory of knowledge, the schema exhibits or unveils its concepts – it does not produce it." (Radford, 2005; p.147)

If the schema is not present, the concept remains undisclosed or even uncommunicated.

The teacher explains that the intentions with the action research cycle were to create a learning design that:

- Bridged between functionalist and situated approaches to learning;
- Create an environment of *concrete labour* that focuses on the intersection between theory and practice;
- Reformat the teacher role to become closer to the learning processes work-groups;
- Make her (the teacher) part of the students learning process more involving;
- Make her (the teacher) part of the lectures non-interchangeable with technology.

These intentions were mostly communicated through text in the syllabus and not at all during the lessons.

The syllabus was presented on the campus LMS as a resource webpage containing all relevant information about the course (Figure 2).

Administration, organisation og ledelse

INTRODUKTION TIL ADM.ORG.LEDELSE

Kære alle på [redacted]

Velkommen til Tema 3, som omhandler Administration, organisation og ledelse. På temataet vil I stifte bekendtskab med både forelæsninger - fzf eller som videoptagelse, studiegruppearbejde med og uden vejledning, casearbejde med spørgsmål, diskussioner, quiz etc. Temataet er opbygget omkring læringsmetoden "flipped Classroom" med henblik på at øge jeres læringsudbytte af undervisningen, derfor er det for jeres læringsudbytte meget vigtigt, at i har set videoerne. I skal være opmærksomme på, at PP til øvrige lektioner (ekstern uv. samt Evidensbaseret praksis) forefindes i mappen Minitema Administration, organisation og ledelse.

Husk at medbringe jeres computer, tablet eller smartphone til alle skemaets lektioner på tema 3

INDHOLD TIL LEKTIONERNE - KVALITET OG IMPLEMENTERING

Lektionerne vil bære præg af aktiv deltagelse, hvor vidensgrundlaget bl.a ligger i den anbefalede litteratur samt videoforelæsningerne.

Modulet starter som bekendt op torsdag d. 22.05 (se nærmere på Web-Units)

Indhold til de tre lektioner er opbygget ud fra følgende: Tid til spørgsmål til videoerne og faglige uddybninger, studiegruppearbejde, samt forskellige arbejdsformer.

PP til lektionerne [Kvalitet og Implementering DUIT.pptx](#)

STUDIEKURSUS ARBEJDE - INDHOLD OG ARBEJDSMETODE

Udover holdundervisning i tema 3 på modul 10 er der planlagt et

Figure 2. Excerpt from LMS

The introductory text is referring to *flipped classroom* and other teaching principals/methodologies that the teachers seeks to utilise in the course, it also refers to the official curriculum for the course. These references are properly not that useful to the students. It would presumably have been more fruitful to align expectations and demands of how to actually take the course.

The students in the focus group explain:

“I just logon, get the PowerPoints and logout again” – Student 1

The student is trying to assimilate to the new learning design by maintaining or recreating the learning design that she is used to in the new learning design, and at the same time limiting the usefulness of the technology (Huffman & Huffman, 2012).

“If there are any notifications somebody copy it and post it on Facebook” – Student 2

The student utters a common tendency, which is that LMS is marginalized in favour of social media. The teacher’s efforts to utilise LMS functionality to improve her learning design proved to be in vain.

“We lack a connecting thread - we put something on the LMS, we get feedback or comments - that never happens” – Student 3

The students wish for more online interaction and feedback. Uploading to LMS without getting feedback seems redundant, almost provocative to them.

“When posting a question on the Facebook group you just know that 60 people will see it and somebody will give an answer” – Student 4

The students use the rhizomatic, a hierarchical nature of networks in social media, which is in direct opposition to the arborescent, hierarchical organisation of the LMS. This notion is interesting in the sense that the intention with the learning design was to produce a map of possible routes to learning and not a trace to follow. The intentions with the learning design wasn’t communicated clearly or understood by the students, in either case it seems like both students and teacher want the same thing; a plateau of intensity in a rhizomatic network of learning, but they don’t quite level with each other in terms of how to construct the plateau (Deleuze & Guattari, 1987).

The syllabus is very well organised and it presents the resources and content of the course very clearly, however it is done in a functionalist way in the sense that one element has a specific function and it is a means to achieve a specific goal from curriculum. The different elements are not situated in the intended context. The syllabus centres its focus first and foremost on content and second on form it doesn’t

describe what the students are expected to do or how it fits into the situatedness of the learning design.

In the terms of the John Biggs the teacher is in the process of “obtaining an armoury of teaching skills” (Biggs & Tang, 2011). That is, moving from level 1 to level 2 in Biggs and Tang’s levels of recognising ones role and obligation as a teacher towards the students learning needs. The levels could be described as follows (Biggs & Tang, 2011; pp.17-20):

1. Is concerned with what the students are; lazy, unprepared, good, creative etc. Teaching revolves around content and possibilities are limited because the teacher is fixating on what the students are. Teaching style; lecturing. Technology; PowerPoint.
2. Is concerned with what the students do in relation to teaching; make videos, cooperate, appear active, participate etc. Teaching revolves around form and activities the possibilities are unlimited anything could be a learning resource. Teaching style; facilitator. Technology; any.
3. Is concerned with how and what the student is learning; heutagogic study skills, feedback and content channels align etc. Teaching revolves around a synthesis of content, form and learning skills. Teaching style is problem based, reflective and relational.

In the interviews and in the first action research cycle the teacher expressed an urge to move away from blaming the students for poor attendance and low motivation and instead take on the challenge of changing her teaching to develop a new more inclusive way of teaching the curriculum for the course. Now she will be moving to level 2 and now she will be the one to blame for any unsuccessful evaluation of the course according to Biggs. The intentions with the new learning design was to centre the student in his/her own learning process and decrease the teachers’ experience of the students being at the periphery of their own learning process. In the teacher’s opinion the students only immersed themselves in the learning process if the content was relevant for exams or for immediate use in a basic understanding of nursing practice. The teacher’s shift in teaching principal could be visualised in a model used to describe learning in an “Open Source Learning stream” (Kjærgaard & Sorensen, 2014; Kjærgaard, 2015) (Figure 2).

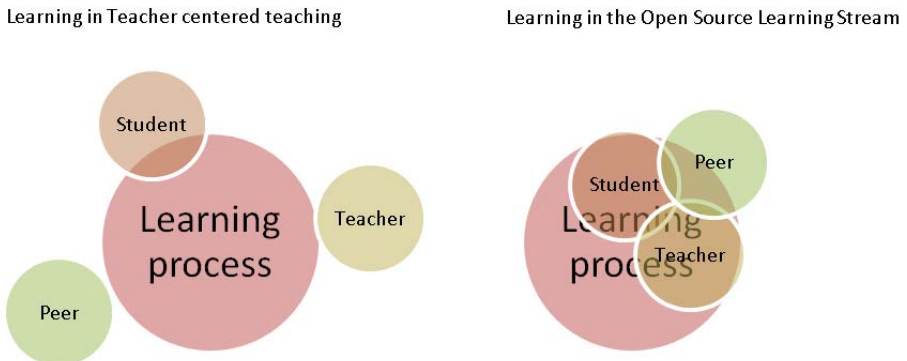


Figure 3. Reconfiguring roles in the learning process

The model shows how students relate to learning in a teacher centred lesson and how they relate to learning in an Open Source Learning Stream (shared learning process in a synchronous stream of learning). In the teacher centred lesson they mostly off-load (Salomon, 1997) throughout the lesson they don't really engage in cognition. Off-loading is the process of documenting the lesson in a system that is not proved to work without the purpose of later cognition:

“What would we say of individuals who off-load some of their cognitive processing onto a computerized expert system without having learned to provide it with appropriate inputs or to read its outputs properly, without having learned to doubt the system’s accuracy or without mastering the skill needed to weight the alternatives it provides?” (Salomon, 1997 p: 127)

The computerised system could be LMS or note-taking in PowerPoint, which is very common for these students. They off-load the overload of information that the lecture provides into systems that they might not be capable of operating properly. In the Open Source Learning Stream it is quite different because off-loading and cognition becomes one and the same in the learners route from legitimate peripheral participant to member of community of practice (Lave & Wenger, 1991).

The teacher wanted to establish a situation where the students would be forced to take centre stage in their own learning process. The video-clips should solve the problem with unreflected off-loading because the video-clips opened for the opportunity to take some of the stress of the synchronous learning situation, that lecturing bring, in the

sense that the students now had the opportunity to revisit the teacher's presentation of processed academic content in a cognitive progression:

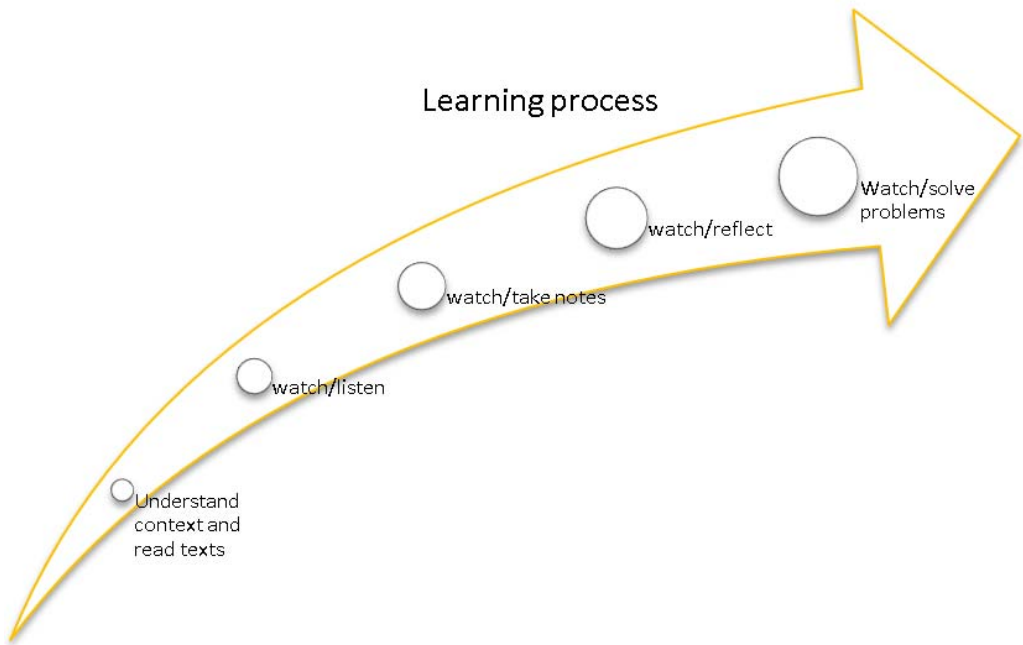


Figure 4. The progression of the students' use of video clips for preparation

The new lessons had no forward momentum in themselves, there were no lectures tracing the route of the lesson which meant that the student/group had to bring forward momentum to the learn process themselves.

Findings

The students were expected to lack schemata, but the interesting part is that the teacher actually also lacked schemata. She also had to figure out how to operate the new learning design. During the action learning cycles leading up to the design process the other members of the research group influenced her. She was new to many of the suggestions that came forth in the action research conferences, which mean that she was to an extent assimilating her own practice to the new design without fully adapting the principles of the new design. This lead to a discrepancy between her expectations of what the new design could bring to her teaching and what actually happened.

In the interviews, the students explain:

“I just gave up reading those 70 pages - I was thrilled watching the videos”

Videos as substitution for reading – an unwanted side-effect that calls for reconsidering of how the videos should support the students’ preparation for lessons.

“We don’t need more literature. We just need a connection between what the teacher says in the video and the texts”

“They [the teachers] just mention all those theories and models. What we need to learn them is explanations, examples and generally elaborations of what is already in the text”

The videos did not bring the putative quality to the preparation that the teacher intended.

“in the video you just saw the PowerPoint, I need to see who it speaking”

The students rely on a phatic connection between video-clips and teacher.

The second run was better than the first and the third run was a success. This means that the teacher’s own schema building was just as important as the students’.

The teacher explains:

“The changes that I have made from the 2nd to the 3rd time, is that I have tried to make the relations between all the elements in the course more obvious. I referred systematically to the work that the students did the day before and asked them to consider what they learned in the next day’s lessons. Last, I wind up the theme trying to get the students to draw on the knowledge they have acquired through the process, by asking them to substantiate their responses / reflections with theory.”

The teacher elaborates:

“Moreover, I can mention that after the third time I have become more familiar with this way of working - and have an overview of all the details / elements, which I didn’t have the first time.”

The findings suggest that there are quite a few considerations to implementing learning designs created through action research. The findings also suggest that a radical change in teaching principal requires a substantial intersection of understanding between teacher and students. Both teacher and students need shared schemata for understanding their role in the learning design.

Conclusion

Action research as a developmental model in teaching has shown a few downsides. The students felt excluded and bewildered. It would have been expedient to include the students in the action research process. The aim of the new learning design was to include more students and to motivate to participation. It would have been fruitful to involve the students the process of designing the course.

The learning design lacks elements of schemata building. The lack of schema as conceptual catalyst results in misconceptions of how to engage in the learning design. The syllabus presented was an agenda for the lessons and a functionalist resource collection. The situated activities that should motivate and include the students were presented as functionalist, teleological *school assignments* and not as situated problem-based cases – even though they were in fact both situated and problem-based.

The students had already established an Open Source Learning Stream in Facebook. The students say that the campus LMS is rubbish and that it lacks feedback from teachers and that Facebook always delivers feedback from peers. This limbo between LMS and social media is not new and a solution properly does not lie in a new *perfect* system but rather in the individual. If the learner/group takes centre stage in the learning process then a *perfect* system is not that important. A mesh of systems including social media and LMS has proved to be fruitful in other studies. An added benefit is that when the students are involved in the selection of digital tools for the mesh then they will have to analyse and discuss the affordances of the digital tools in the actual context. While analysing digital tools the students would engage in a shared meta-learning process that would sharpen their perception of how digital tools can enhance learning processes.

The analysis of the implementation process also showed a few pitfalls, one being that the students use the videos as short-cuts for easier preparation for the lessons. This is positive if the alternative is no preparation but in an ideal context, it is negative because the videos only deal with the digest of the texts. It also shows the importance of making relations between videos, texts, context and activities. The study shows that the videos should:

- Contain instructions on how to use other resources in relation to the videos;
- Contain footage of the teacher presenting the video;
- Elaborate on the content of the texts;
- Not paraphrase texts and other resources;
- Not make texts redundant;
- Be approximately 10-15 minutes of length;
- Contain articulation of the intersection between video, text and activities;
- Be personal to the teacher;
- Be accompanied by activities that necessitates all resources for preparation (test).

The study also shows the importance of developing the students understanding of how they learn and which digital tools are helpful and in what ways. The implementation of a new learning design should address meta-learning as a part of the new design focusing on the self-regulated learning skills applicable to the learning design.

The teacher is the theoretical expert and the specialist in nursing practice and the students are in the process of becoming nurses. Within the intersection between the two positions students and teacher share the wish for acquiring new skills, competences and a higher reflective level. The study concludes that if the teacher does not address this in her reflections on how to design her teaching the shift between a functionalist approach and a situated approach seems difficult.

The three layers that we interpret to be of importance (presented in Figure 1) is the notion that the schema sets the outer perimeter for chaos and, thus, establishes a chaosmos in which the students can develop strategies for self-regulated learning. This interpretation also implies that without the schema the students (and teacher) are prone to experience the learning design as chaotic.

According to the model, the teacher may need to address the outer perimeters of chaos explicitly when implementing a new learning design. As the students explain the learning design becomes *brittle* and prone to create chaotic circumstances instead of delineating the perimeters within which chaos may turn into a chaosmos in which learning is possible.

To put this into perspective, Dave Cormier, who we regard as one of the forerunners of a community and learner centred learning design, also addresses the outer perimeters of chaos. His notions of *rhizomatic learning* (Cormier, 2008; Cormier, 2014) and *community as curriculum* (Cormier, 2008) starts with establishing a structure for learning in a rhizomatic community. Dave Cormier explains it as follows in the course blog (Rhizo14):

“So we need some structure, at least in the beginning, to make sure that everyone gets to play. Some of this structure can take the form of remediation... where you prepare answers to simple questions that allow newcomers to help themselves. We also need to have an effective way for people to be able to ask the community simple questions and ways to effectively mentor people to a place where they can be fully contributing members of the community.” (Cormier, 2013)

This implies that we may need other ways of creating and communicating new learning designs. The analysis of the implementation process indicates that a traditional syllabus may not be sufficient for making sure that the learning design creates conditions for learning.

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