Teachers' self and the lifelong learning transitions through networked learning experiences

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Abstract

As emphasized by the networked learning perspective (NWL), interconnectedness between resources, peers and trainers, allow effective learning. This definition is coherent with the new perspectives on teachers' professional development (Zenios et al, 2004; Hanraets et al. 2011) . In line with this, the present paper studies how teachers' conceptions on pedagogical practices changed through the participation to NWL experiences within the frame of a transnational project (COMENIUS LLP P.I.N.O.K.I.O project: "Pupils for Innovation as Key for Intercultural and Social Inclusion"); to do this, teachers' narratives about exploration and implementation of the project's method within professional practice were analyzed. The conclusions emphasize the links between learning biographies and teachers' discourses within NWL experiences. These elements could be considered as increasingly indistinguishable in a lifelong learning perspective of teaching profession, since teachers connect their own identities with the results of meaning making processes in the several, interconnected learning spaces on the Web, connecting the several learning cultures, resources and models with their own personal/professional narrative of the self. These results allow us to understand how significant changes in teachers' lifelong learning cycle can be rooted in specific networked learning practices. In this sense, connections with specific resources; "learning rituals", and educational values lead to shape symbolic constellations as part of professional identity on complex, open networks.

Keywords

Case Study – Teachers' Professional Development – Networked Learning – Learning transitions

1. Introduction

The preparation of quality teachers, as important factor affecting student performance (Rivkin, Hanushek, Kain, 2005), gains attention within the ET 2020 strategy (European Commission, 2010), highlighting the complex role of teachers as mediators/facilitators within a changing educational system that aims to respond to a rapidly evolving world. This requires a culture of reflection and research in a lifelong learning perspective, within equitable and efficient educational reforms. European discourse, therefore, focuses on common principles for European teachers' competences and qualifications (European Commission, 2005), as well as on improving teacher training (European Commission, 2007). The document of 2005 sets three broad competence areas for well-qualified, mobile teachers as lifelong learners: (i) working with knowledge, technology and information; (ii) working with fellow human beings; (iii) working with and in society, recalling the focus on general, transversal competences for LLL (European Commission, 2007). The 2007 report, however, highlights the lack of consistency and coordination between different aspects of teacher education, low budgets for professional development, and few incentives to promote teacher motivation and retention, a claim yet renewed by the TALIS research (OCDE, 2009) about the transition of teachers from traditional conceptions of teaching towards innovation (as the use of socio-constructivist approaches for teaching). Problems of age, the lack of an university training and proper continuing training; the conflictive dynamics of educational institutions; as well as the loss of social status of the teaching profession, makes teaching a frustrating experience, with it consequences at personal and professional level (Bolìvar Botìa, 2004). Teachers tend to feel outdated and overloaded with new exigencies of new learning contexts and the challenges posed by education moving into the digital age.

In fact, as A. Hargreaves has indicated, a new teaching profession *"involves a movement away from traditional professional authority and autonomy towards new forms of relationships and collaboration with colleagues, students, and their parents"* (Hargreaves, 1994:424).

In this context, teachers' professional development (TPD) is considered the best way to tackle the problem, supporting smooth (lifelong) *learning transitions,* through forms of authentic learning, situated in the professional context of practice. This statement is clearly opening a new era for teachers' training, which aim should be the creation of appropriated environments for professional development where teachers' creativity, a transversal dimension of innovation in pedagogical practices (Hagger & McIntyre, 2006), is enabled. In order to achieve this aim, encouraging

reciprocal learning between beginning and experienced teachers (Patrick, Elliot, Hulme & McPhee 2010) and giving value to informal practice-based learning networks for sustained professional development of teachers (Hanraets, Hulsebosch & de Laat 2011; Bradshaw, Twining & Walsh 2011), seem to be crucial factors. Accordingly, in the broader context of both UNESCO (Villegas-Reumers 2003), and the European Union, the school is seen as a learning organization where TPD has a place in the sense *of an active and constructive process that is problem oriented, grounded in social settings and circumstances, and (...) throughout teachers' lives* (Scheerens 2010 p. 32). Teachers' education and continuing training could also take place effectively on the Web (Bradshaw et al. 2011). In fact, the Web as new social context of practice, has led to the emergence of experiences of professional learning; also the consolidation of the professional identity, through the participation in virtual learning environments, has been declared to occur (Zenios, Banks & Moon 2004). The experiences of informal exchange of web-resources and the engagement in social networks, with the phenomenon of the Web 2.0; as well as new collaborative and constructivist learning approaches, have opened the possibility for educational researchers to shift the focus from the electronic medium (eLearning/online learning research) and the asynchronous interactions that characterize the educational relationship mediated by technologies (distance learning) to the Web as part of a scheme of social activity in the *networked learning* approach (Raffaghelli, 2011). The notion of networked learning (NWL), indeed, encompasses the idea of connection between learning communities and resources, by enhancing information and communication technologies (Goodyear et al. 2004). This concept goes far beyond the access to virtual learning spaces, resources, or facilities provided by technologies to improve communication. Based on the belief that learning is a social practice, this concept implies participation and transformation of reality (Jones, 2008). It can be assumed that Networked learning is not an individual process , but a joint activity carried out through *connectedness* (Zenios & Goodyear, 2008). We could hence assume that the conception of networked learning is coherent with new approaches for teachers' professional development. If effective, the approach should encompass consistent modifications on teachers' conceptions of the own competence to tackle with educational innovation, in a direction of a lifelong learning profession, generating complex professional learning environments that enable *lifelong learning transitions.*

1.2. The research focus

In this article, I will emphasize the focus on modifications of teachers' conceptions regarding the adoption of educational technologies as a mean of pedagogic innovation in class, in the context of a transnational project of educational cooperation. NWL supported the national and transnational teachers' training programme, as preparatory phase for testing activities in class. The leading assumption is that this NWL experience becomes *isomorphic* to pedagogical practices, in the sense that while teachers get more and more confident with the NWL approach, they tend to adopt the same approach to practices in class. The study is based on the analysis of teachers' narratives about exploration and implementation of the project's method within their professional practice. In fact, in the case study I am about to introduce, teachers showed how reluctance to use educational technologies (as they felt badly qualified to do so) changed through progressive use of online learning spaces to dialogue with peers and reflect on their professional practices regarding the project's method and activities, opening to personal and professional transitions as lifelong learners.

2. The case study

2.1. The teachers' professional learning context

The project "P.IN.O.K.I.O.- Pupils for INnOvation as a Key to Intercultural and social inclusion" aims to promote intercultural dialogue against social exclusion, using children literature characters as a communication tool for pre-school and school children, immigrant children and their parents. One of the project's assumption is that children literature used in today's multiethnic schools, would allow interaction between children from different countries, bridging cultural differences between such cultures through a cultural/symbolic discovery process based on children literature characters, sceneries, and images introduced through a socio-constructivist learning environment. Therefore, the project's core activities were:

- Teachers' formal training on the project's approach, the process of implementation of innovations, and the use of specific tools and methods.
- The production of online tools (together with teachers) for better children access and learning through stories and tales.
- Testing activities (i): "Intercultural Workshops", as implementation of shared activities children, migrant-children and their parents focusing on intercultural dialogue that addresses social inclusion, through children literature and invented stories.

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- Testing activities (ii): 'Creativity Labs' for the development of key competences that support forms of combating poverty and social exclusion, on the basis of traditional and invented stories' characters.

Teachers declared to be used to adopt stories in primary and pre-primary school in order to create supportive learning experiences through identifications with characters and narratives; thus helping the kids to perceive and interpret feelings, actions, ideas, relationships in a broader context of values. Furthermore, intercultural and transnational activities through the use of fairy tales envisaged in the project were easily assimilated considering the foreign nature of characters and stories chosen by teachers to work in the project. Hence, trainers worked on the assumption that symbols in children literature, can be easily deconstructed, modified, reconstructed, re-elaborated and dramatised by both learners and teachers, introducing a critical perspective of social and cultural values lying behind stories. In this context, the use of technologies, was proposed as a *mediational mean* (Werscht, 2007) , in the sense that the telling, reconstructing and sharing stories through educational technologies would help both teachers and kids to better interact (using active methods) to deconstruct and reconstruct meanings. The question was: how to adopt proper channels of dissemination of children literature, considering the growing interest on the Web and on mobile technologies? If we consider the premise that new generations are born and grow up exposed to and interact with screens from the very early years, within a new (symbolic) territory; we could say that their cognitive and social skills are mediated by virtual realities in ways that are inconceivable to adults. Therefore, it was assumed that not only can new technologies offer unique opportunities of access to children literature, providing multimedia contents that make the experience stimulating; they can also provide privileged means for interacting with children literature's characters and environments, thus affording the ability to create new contents based on children literature's icons, situations and values, which continue to be the kernel of children's universe. Digital tools where hence conceived as mean for *analysing, manipulating and re-elaborating stories*[1] .

Table 1 shows the tools adopted within the project, suggested by the research and design team, but differentially implemented by teachers:

Table 1 – Digital Tools within P.IN.O.K.I.O approach

Digital Tool	Brief Description of Educational Implementation	Educational Aim
Blog	- To document and reflect on learning processes (as a course of actions/practices) - To communicate with other european schools within P.IN.O.K.I.O community(blogroll)	Open Class Learning environment - *Collecting Class Narratives*
Movie	- Co-construction of learning processes - Cooperative-learning - Peer-collaboration and Peer-tutoring	Planning, Producing and Sharing Stories
Podcast	- Understanding temporal sequences in a story: telling stories as a process - Sharing learning results "ubiquitously"	

However, many teachers in the four countries involved declared initially to feel unable of conducting the own work with children literature by implementing technologies as part of pedagogical innovation.

Networked learning was seen in that sense as a key dimension to support "technological pedagogical knowledge" development, as part of that dimension of knowledge that allow the teacher to introduce technologies not as a supplement of the own activity, but as intrinsic methodology of generating knowledge and practices within learning processes. The partner institutions within the project, coordinated by the Interuniversity Center for Educational Research and advanced training (CIRDFA) developed activities and guidelines for teachers taking into account some educational principles that linked together the above mentioned technologies. Later on, a formal activity of training was implemented (adopting a blended approach differentially introduced in consideration of the several national contexts; some countries worked through much more eLearning activities, while others implemented many "coaching" on site activities; in any case, the approach of networked learning was respected, with communications across frontiers and throughout the entire process of experimentation). This training should support later autonomous process of experimentation in class (intercultural workshops and creativity labs). Teachers kept using online spaces to communicate, mixing the formal learning environments (platforms) with social networks, reinforcing the dimension as networked learners and hence their confidence on the use of educational technologies.

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[1] Pinokio Project, Deliverable 16 "Teachers' Educational Programme", CIRDFA.

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2.2. Research Approach

We could consider the approach of this research in the light of *action research* (Whitehead and McNiff, 2006), in the sense of interventions and activities where elements and situations are imagined in advance by the same stakeholders (teachers and researchers), considering their possible relationships supporting learning. This design, however, consider progressive phases where the process of educational development is implemented, and where a transformational vision out of what happens while doing, qualifies stakeholders as learners and active players, able of modifying their own reality. Taking into account this ideas, research design included several phases (including formal training, teachers' planning of learning units, testing in class and reflection) through the use of a blended approach of learning, in six institutions coming from four countries of Europe: United Kingdom, Portugal, Switzerland and Italy. Every institution adopted a common framework of knowledge to be used within training, but the approaches where diversified according to the national contingencies for practice.

The table 2 summarizes the several groups participating to the training and the kids involved in this active approach.

Table 2 – Involved Groups

Country-Region	Italy (IT) Pescia	Italy (IT) Palermo	Switzerland (CH) Ticino	UK London	Portugal (PT) Madeira
Type of School	4 Pre-primary (PP)	-	-	3 Pre-primary	2 Pre-primary
	3 Primary (P)	1 Primary	2 Primary	3 Primary	3 Primary
Classes involved	6 PP - 8 P	3 P	5 P	4 PP - 9 P	5 PP - 5 P
Teachers	7 PP - 14 P	3 P	5 P	6 PP - 18 P	5PP - 7P
Children	316	54	98	273	103
Foreign Children	76	8	10	159	41
Activities					
Teachers Formal Training	**September-December 2010** *50% eLearning* *10% FTF* *40% Coaching and peer collaboration*	**September-December 2010** *20% eLearning* *60% FTF* *20% peer collaboration*	**November 2010 January 2011** *10% eLearning* *80% FTF* *10% peer collaboration*	**January 2011 March 2011** *10% eLearning* *80% FTF* *10% peer collaboration*	**January 2011 March 2011** *10% eLearning* *80% FTF* *10% peer collaboration*
	• Children Literature and Intercultural Learning (mainly PT) • Selecting stories, Learning on Blog, Movie, Podcast • Digital Storytelling and Key competences promoted by PINOKIO (focus on "Movie") (mainly CH and UK) • European Key competences Framework • Introducing Testing Methods • Reflecting on practices: use of blog • Learning Design				
Testing: Intercultural Workshops	**March-April 2011** *10% eLearning; 30% Coaching and peer collaboration; 40% Activities in class; 20% Use of Social Networks (Web 2.0)* • Teachers' transnational networked learning activities to plan intercultural workshops • Implementation of activities with families : international cooking; using maps to see countries of tales' characters, foreign students, foreign parents; telling "other" stories, inventing stories; representing stories; sharing stories through movies and blog.				
Creativity Labs	**May-June 2011** *10% eLearning; 30% Coaching and peer collaboration; 40% Activities in class; 20% Use of Social Networks (Web 2.0)* • Creating games with children*: "puppet-looking for things"(IT), The Pippi Longstocking game - a game in 'snakes and ladders' style (IT), "Did you learn the rules… show it!"(IT), creative stories cards' (UK), body sculptures (UK), Pinokio around the world (PT), "Reinventing stories"(CH), e*tc. • Children create the rules of games, using characters and situations of both traditional stories and stories told with parents. • Results are shared through the blog or movie to show "how to play" to other kids.				

Figure 1 introduces, instead , a scheme that reflects the conceptualization on the adopted approach of design, action and reflection used by researchers that supported teachers in creating their innovative practices. As we can see, the circle of being informed, participating, designing and implementing and finally reflecting on practices for sharing with peers and

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a broader community of practitioners, is framed by "spaces" generated by educational technologies. These spaces are connected only through teachers' process of progressive conceptualization of practice, then becoming "nodes" of a networked learning environment, that in time enact other teachers' practices.
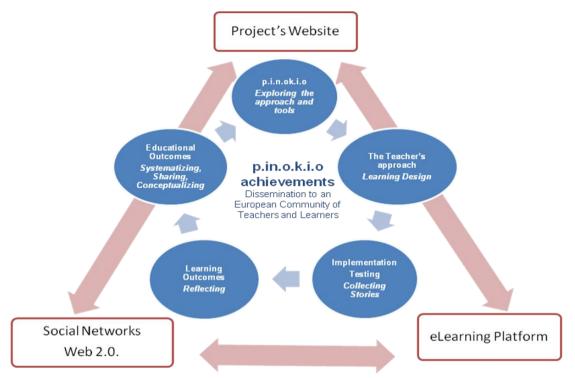
Figure 1 – The teachers' networked learning process

Consistently, data was collected considering the following sources, for a qualitative analysis (mainly discourse and semiotic analysis of meaning making processes) as well as content analysis:

a- After training questionnaires: teachers' opinion on their own initial learning and motivation to transfer
b- Online Forum exchanges: analysis of messages (open codification)
c- Teachers and children production: semiotic analysis of blog posts (including pictures and audiovisual materials).
d- Teachers' Interviews by the end of the experience

Therefore, results are presented following this same sequence.

3. Results

3.1. Teachers' impressions on initial networked learning and motivation to transfer

The results hereby presented regard mainly the Italian group as learning community, that was followed by the researcher as trainer/coach.

Taking into account 24 Italian teachers' opinion on their own initial learning and motivation to transfer, results showed that:

- Contents of training were clearly delivered (87% completely agree), even when considered complex (58% completely agree and 12% agree).
- Trainers' guidance and scaffolding on networked learning activities stimulated the teacher interest on the project's methodology and activities (83% completely agree), which was considered innovative (75% completely agree);
- Regarding the digital tools, opinions were rather heterogeneous, with an 87% that completely agreed on the usefulness of blog, and 79% and 58% of usefulness for movie and podcast respectively. When teachers' were asked about their applicability in their classrooms, 91% replied to be motivated to use the blog; a 62%, to use movie; and just a 20%, to adopt podcasts.

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- Through open questions, teachers' manifested that online discussions, matched with peer collaboration to experiment and produce first "prototypes" of digital tools, were extremely supportive and important in order to gain ***confidence with a language they had never experienced before.***

3.2. Teachers' expressions about national seminars and international online conference on practices

In line with the above introduced reactions to educational technologies training programme, online transnational discussions, integrated to interim national seminars were implemented, with the aim of launching the "testing activities" phase (Intercultural Workshops and Creativity Labs). These activities became also a place for exchanges of views and ideas, showing first impacts on teachers' conceptions about their own skills as implementers of innovations in class.In fact, it emerged that innovations were tightly connected to teachers' feeling of becoming not only "*active networked learners*" but also "implementers" of "networked learning experiences" for their own kids.

Maria and Katia from Primary School (Italy)[2]
International online conference

Hello everyone again. 🙂
In our introduction you read some information about us and our specific role in classes IVA and IV B of our Primary School (...).
Now we would like to share with you what was the project's impact in the pupils and in ourselves as teachers.
It facilitated us and the students, as it was in its aims, to be involved in more "open minded" interpersonal relationships.
Secondly we have been stimulated to re-think, project and plan our standard lessons in a more creative and cross-curricular way.

Operatively informatic technology (educational technologies) *has been our privileged tool to carry out our final products.* 😄 *We realized that making audio-books, recording pupils voices, designing maps through the web fostered the development of pupils' various abilities and skills (metacognitive, logic,creative,linguistic and artistic)...But in the end it was fun and thoughtful for us also! We have had many occasions to work in small groups in which pupils, particularly foreigners and disabled,could have the chance of being protagonist of their own learning process.*

In other words this kind of activities fostered children-centred learning, self esteem and respect of peer students. 🙂 *Finally, though not less important, both teachers and pupils have experienced cooperation, problem solving negotiation and attribuition of objectives* (learning goals' planning and implementation) *considering everyone's attitudes and competences.*
Note: the post concludes with an image, that is the same adopted to introduce, within the teachers' eLearning platform, the area of "discussions" as part of laboratories of learning design.

Giulia and Barbara from Pre-Primary School (Italy)
International online conference

Hi, we are Giulia and Barbara from (...) Italy!
About the project, the most difficult thing in its esecution (execution), *was that of "thinking in a technological way"; in fact, at the very beginning, we found some troubles, because we were used to document our work through pictures, books and not through e-books, pod-cast etc.*
Children answered very well to the project and they showed their interest in the light of the new ways of projecting (doing in class)*; especially, they liked hearing their voice and watching their works in the blog (...)*
Bye Bye,

Note from the interview to Giulia (original in Italian):
Kids weren't the only to enjoy results. Even when a great part of work was done by BB (the CIRDFA's trainer), I really started to loose that feeling of panic when adopting technologies, particularly doing things in class like recording in class and creating a movie, or posting to a blog. My kids this year are very young,but they know things like "my dad has many songs in his mobile and one he recorded me and we listened together!". It's kind of "I'm not the only one that knows here". But adopting technologies to re-tell old stories was fun and, in the end, challenging to me as teacher.

This is what I called "the *isomorphic* effect": the reflective deconstruction of fear and prejudices against educational technologies, while building actively learning environments with the use of them , triggered in the teachers the pleasure of playing with "the new", in a joint venture with their kids. For some of them, the idea really represented a sense of "*talking languages closer to those of kids*". As we can see, the *isomorphic* effect, takes place in an authentic learning environment for teachers (the process of planning and implementation), which is nurtured with dialogue and interactions, and strongly supported by the NWL approach. But, as we will see in the next paragraph, identities play an important part in shaping the professional learning environment.

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[2] Note: false names have been used to protect identities of participants. The text of the forum and teachers' logs extracts include errors originally found in entries. Words used to amend post have been agreed in the personal interviews.

3.3. The teachers' log and the multimodal narratives collected on networked learning spaces

Teachers reflections, collected through an online diary, showed how the process of creating and "expanding" the "personal" networked learning space accompanied the deconstruction of beliefs about the use of educational technologies against traditional conceptions:

Alessandra, Nursery School,
1st Annotation (October 2010) , original in Italian.
Here I am, starting my reflections in this diary!
My name is Alessandra (...) I dont' deny that, initially, this new P.IN.O.K.I.O. project made me and my colleagues to feel worried, not because of educational activities, but mainly because of the use of new technologies and the need of knowledge on the European Key Competences…

6th Annotation (January 2011), original in Italian
For our institution (...) this type of work has been a challenge and a discovery, it has been a new experience. For many of us, accostumed to work in a traditional way, and, most of all, accostumed to use printed materials and paper,this experience could be stressful. But instead of that, it has promoted a process of professional development, it made me grow, learning in sinergy with technologies, that I can recognize now indispensabile for the future of education.

The process was also supported by important creative and emotional "embodied" experiences, where networked learning was mixed with experiences in class and with parents.
In fact, reading the first posts on the blog, where teachers were invited to introduce themselves as a character, was later on connected with the implementation of digital storytelling, and again, linked to experiences with parents, post on the blog, representations of experiences in pictures, games in class, and closing reflections. We see on the table….some examples of these transitions through "multimodal narratives".

Timeline	Beginning of October 2010 Confident with storytelling, shy with technologies	Middle November 2010 Digital representation of the traditional tale With kids	Middle December 2010 Performance, recording, sharing to the Blog	Beginning of March Opening classes to parents	Middle Aprile Inventing Games and reflecting
Teacher Alessandra	First post on Blog *I'm Pippi Longstocking, because I like to be independent and I'm a traveller!* (blog post)	First Digital storytelling "Pippi Longstocking" *Discovering with kids: she's not Italian, where's she from?* (e-Book audio and blog post)	The story of Pippi and friendship, from performance to the blog: *Diverse friends, unusual people, use to be with Pippi. She was so independent!* (Blog post and pictures)	From stories and open labs with parents *Travelling and cooking: the book of tastes.* (Blog post and personal diary)	The travel of Pippi. The game on the floor, the game on paper, the game as online representation. *This is my own travel as teacher* (from Interview)

4. Conclusions

The conclusions emphasize the links between learning biographies and teachers' discourses within networked learning experiences, as part of a professional learning environment. The elements analyzed could be considered as increasingly indistinguishable in a lifelong learning perspective of teaching profession, since teachers connect their own identities with the results of meaning making processes in the several, interconnected learning spaces on the Web, connecting the several learning cultures, resources and models with their own personal/professional narrative of the self. The results of this case study seem to reinforce the idea that teachers adopt innovative pedagogical approaches when they have a *living experience* on them (McNiff, 2010), within authentic professional learning environments, where the professional identity is (dis)played, and its symbolic elements rearranged. In line with studies on embodied cognition in the virtual learning spaces (Macfadyen, 2008) teachers' progressive engagement show that the true mastery and meaningful learning is achieved through and embodied educational encounter where teachers negotiate experiences, prejudices, fears and expectations on their skills and knowledge to introduce innovations in class. By writing and representing with mixed words-images their experiences back into the virtual context, teachers had access to a space that permits new forms of subjectivity. Moreover, teachers clearly described ways in which they have integrated new aspects of identity, developed in the virtual classroom, into embodied pedagogical practices addressing the project's methodologies and ideas. One difficulty of many studies on TPD, in fact, is the evaluation of teachers' performance after learning: new integrated learning approaches, evaluation should take into account narrative and qualitative methods; particularly,

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semiotic/multimodal analysis of results, in pre-primary and primary education could shed light on teachers' professional learning with real impact on effective teaching.

Finally, these results allow us to understand how significant changes in teachers' lifelong learning cycle can be rooted in specific networked learning practices. In this sense, connections with specific resources; "learning rituals", and educational values lead to shape symbolic constellations that take to pedagogical practices; and pedagogical practices that have specific impact on teacher's cognitive and pedagogical knowledge, as part of its professional identity on complex, open networks.

This will surely configure a new frontier for TPD, where professional learning environments will be supported by complex processes of NWL.

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