

OY/EO4331

SITUATIVITY THEORY AND EMERGING TRENDS IN TEACHER PROFESSIONAL DEVELOPMENT

Susanne Owen

Department of Education and Children's Services, South Australia

Doctor of Education Candidate, University of South Australia

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Abstract

The current focus on teacher quality in Australian education has highlighted the importance of ongoing professional development (PD), with research (DETYA, 2001; Kenway et al, 1999) indicating the effectiveness of school-based PD and other longer term programs.

These examples of PD approaches link to Vygotsky's Zone of Proximal Development (ZPD), situativity theory and communities of practice research. In particular, Vygotsky's ZPD focuses on potential performance and uses social and environmental artefacts to deliberately accelerate learning and the internalization process beyond competence.

In applying ZPD to teacher learning, situativity theory rather than an individually-based cognitive learning approach is emphasised. Therefore, the most effective PD is situated in a particular school, team or community of shared understanding. It involves social interaction and includes learning from observing individuals, sharing ideas through oral and written language, and engaging in practical tasks such as analysing student work.

Situativity theory may be further expanded beyond situated authentic practice activities to encompass Communities of Practice, which emphasises an anthropological perspective. While Communities of Practice highlight learning within the social context, a significant focus is that the individual identity becomes intertwined and inseparable from the community. A key aspect is that reproduction of the community occurs through a process of legitimate peripheral participation of newcomers. This involves gradual negotiation of meanings, with the learner progressively moving towards a more central position in the community.

This paper examines the concepts of ZPD, situativity theory and Communities of Practice in relation to emerging trends in teacher PD. Coaching, mentoring, study groups and other PD examples will be discussed.

Introduction

Teacher quality is increasingly linked to ongoing teacher learning, with new models of teacher Professional Development emphasising teachers and leaders as practitioner researchers as a key group in the reforming of classroom practice for more effective student learning. Practitioner researchers question what is happening in their classrooms and schools, identify issues to study, conduct their own research and make decisions for taking action in the future.

Professional Development including practitioner research, is increasingly focused on exploring strategies for supporting all students in completing their secondary education, coping with an expanded academic curriculum, fostering critical thinking and problem-solving skills linked to technological and workforce change, and developing relevant social programs (Glickman & Aldridge, 2001; Dinham, 2000). Teachers are being held accountable for educational outcomes and

are expected to continually upgrade their knowledge and skills during their teaching careers through ongoing Professional Development including practitioner research (Hinde, 2003; Feiman-Nemser, 2001). Brain and learning theory, pedagogy, developing critical thinking, change management, and motivational studies are emerging topics of significant relevance to teacher Professional Development (Dinham, 2000; Kenway, Henry, Johnson, Matthews, Blackmore, White, Muhlebach & Bates, 1999).

Within the practitioner researcher context, this paper outlines recent approaches to effective teacher Professional Development using the theoretical lens of situativity theory, including links to Vygotsky's Zone of Proximal Development. The anthropological perspective of situativity theory is related to Communities of Practice and to specific aspects for effective teacher learning. Emerging trends in teacher Professional Development of school-based study teams, mentoring and coaching are discussed.

Approaches to Teacher Professional Development

In the past, teacher Professional Development involved teachers in attending one-off conferences which included experts who informed them about university research findings regarding emerging trends for improving educational outcomes (Hargreaves, 1997, Kenway et al, 1999). These conferences were based on the behaviourist theory learning model which focuses on input and transmission of knowledge, or the cognitive approach involving each conference participant in manipulating new ideas and making links to prior knowledge, reflection and problem-solving. These approaches were essentially unconnected to broad school directions and, after the conference, there was little opportunity for support and follow up at the local level (Spillane 2002). Therefore, transfer of knowledge from external courses to the school site was limited and teachers have traditionally left such conferences with a sense of enthusiasm, but with little real understanding or time to consider applicability of the new ideas to their own classrooms (Bredeson & Scribner 2000).

However, increasingly Professional Development is being defined in terms of a more extended change process as:

...those activities which systematically over a sustained period of time, enable educators to acquire and apply the knowledge, understanding, skills and abilities to achieve personal and organisational goals and to facilitate the learning of students.

(Indiana State Teachers Association, 2004)

This ongoing Professional Development approach within the daily school community reflects practitioner research and programs built around appropriate adult learning models. Current research regarding effective Professional Development (Kenway et al, 1999; DETYA, 2001; Feiman-Nemser, 2001; Head, 2003; Rhodes & Houghton-Hill, 2000) highlights particular programs such as coaching, mentoring, school-based Professional Development and study groups operating within the daily life of the school:

In the new view of Professional Development, teachers are engaged in professional learning every day, all day long. It pervades the classroom and the school. It is embedded in the assignments and analysis that teachers perform every day as they continually draw understanding about their performance from student performance. Teachers learn together. They solve problems in teams or as a whole faculty because every teacher feels responsible for the success of every student in the school community. Rather than looking only outside of the school for expertise, teachers build it within their own environment, becoming avid seekers of research and best practices that will help themselves and others.

(NPEAT 1999: 2)

The National Partnership for Excellence and Accountability in Teaching (NPEAT) (1999) synthesises research-based principles for effective teacher Professional Development, based on the United States Department of Education and the National Staff Development Council, as follows:

- content focused on intended student learning material and addressing potential pedagogical problems
- focus on analysing the differences between actual student performance and standards
- teacher identified learning focus and Professional Development program design
- primarily school-based and built into the day-to-day work of teaching
- organised around collaborative problem-solving
- continuous, ongoing and supported learning, including external support
- uses multiple evaluation sources of student outcomes and instructional processes
- involves theoretical understanding of underpinning knowledge and skills
- connected to a comprehensive change process focused on improving student learning.

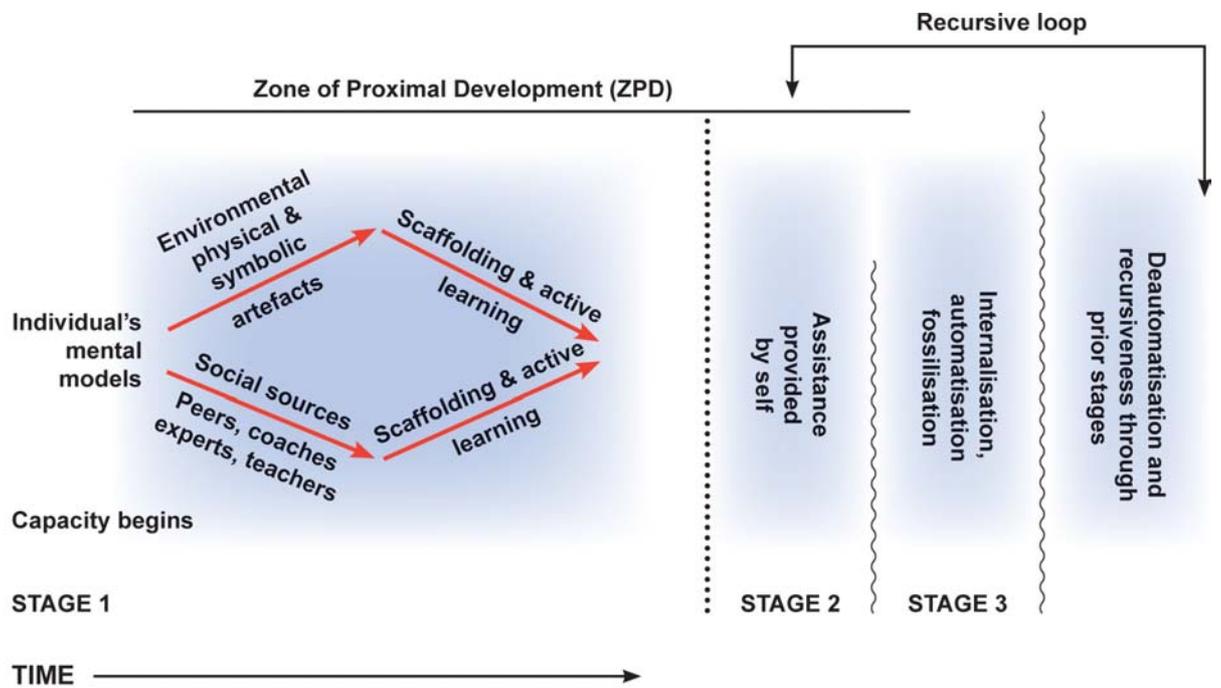
These Professional Development standards link to situativity theory as will now be outlined.

Situativity Theory and Vygotsky's Zone of Proximal Development

Situativity theory or a situated learning model is a theoretical lens through which effective Professional Development may be analysed. Situativity theory emphasises learning as being connected to the situation, with individual cognition and meaning being socially and culturally constructed. This involves working collaboratively, addressing contextualised authentic problems and negotiating meaning through practice (Barab & Duffy, 2000).

Situativity theory may also be viewed as linking closely to Vygotsky's work including the Zone of Proximal Development (ZPD)(1978). Vygotsky's Zone of Proximal Development highlights that all language, traditions, beliefs and objects are created by people within a culture, and that achieving higher mental functions involves an external socially-mediated stage. Through a formal scaffolded program of social and other environmental artefacts, accelerated learning of an individual occurs which means competence at a higher level than without intervention is achieved (Verenikina, 2003).

While Vygotsky's research has been traditionally associated with children's learning, it can be useful in discussing teacher Professional Development. As indicated in Diagram 1 below which focuses on the ZPD, in order to accelerate the learning of teachers, at a particular point in time with a given learning capacity, the learner becomes engaged in a structured and scaffolded program. This involves environmental, physical and symbolic artefacts such as books, language and student assessment work, as well as social interactions with colleagues, coaches and others. At Stage 2, the learner incorporates the scaffolded learning into their own mental processes to reach increased capacity. This new learning is internalised and automatised at the third stage, although this learning may be questioned and rethought by the individual in later stages, as indicated in the recursive loop aspect as follows:



Adapted from Verenikina (2003) and NCREL

Diagram 1: Vygotsky's Zone of Proximal Development

Therefore the ZPD connects to Barab and Duffy's (2000) situated learning model or situativity theory. What is relevant to practitioner research is that colleagues work together on a real problem, which involves team members in supporting each other. This may include scaffolding and breaking a task into manageable sections when issues are complex. Coaching, modelling, collecting data and examining student work may also occur, these activities highlighting cognition as distributed over people and artefacts.

Within situativity theory, there is a range of approaches which is the focus of the next section of this paper.

Psychological and Anthropological Approaches

Within the situated learning model, Barab and Duffy (2000) identify that there is a range of perspectives concerning the role of the individual mind in the learning process, with the psychological and anthropological branches being represented. The psychological perspective highlights cognition and meaning through situated activities in practice fields resembling real life situations. Highly relevant to practitioner research is the anthropological view which focuses on learning within actual Communities of Practice. Meaning, solutions and interactions gained ensure that the individual identity is inseparable from the community and community members take responsibility for the learning of others in the group.

Specifically, the psychological perspective highlights cognition within a situated context and constructing opportunities for authentic learner activities for the purpose of transmission and acquiring meaning. This approach is consistent with Resnick's (1987) focus on authentic problem-solving and critical thinking, Schoenfeld's (1996) cognitive apprenticeship of experts thinking out loud and reflecting with students, and Senge's (1994) practice fields involving experimenting within realistic contexts but separated in time, setting and activity from the actual professional context. Gardner (1993) views solo and distributed cognition as interdependent, while Brown, Collins and Duguid (1989) focus on learning as moving beyond acquiring understanding to active involvement and using concepts and tools to build a rich understanding of the world. Salomon (1993) also

highlights the psychological perspective and individual cognition, with the focus on joint socially mediated activity, amplified through resources in the learning environment. While the emphases for these theorists regarding the role of individual cognition processes may vary, the focus on learning through activity, constructing new ideas through the individual interacting with the environment, and contextualised rather than abstract learning, represent the common characteristics of situativity theory within the psychological perspective.

The anthropological perspective is similar to the psychological perspective in the focus on a common cultural and historical heritage of shared goals and negotiated meaning in practice. Pea (1993) indicates that the resources for learning, including individuals, physical and social artefacts are constructed and individual cognition cannot be separated from cognition in the learning environment. In addition, compared with the psychological perspective, more ongoing enterprises rather than engagement in particular tasks, and sustained and continuous collaboration rather than temporary links, are involved. However, Barab and Duffy (2000) note that in the anthropological focus within situativity theory, authentic learner activities for the individual are located within a community. Identities and interactions, as well as meanings, are constructed within this environment, such that developing of the whole person occurs and no boundary exists between the individual and the world. 'Developing an identity as a member of a community and becoming knowledgeable skilful are part of the same process, with the former motivating, shaping and giving meaning to the latter' (Lave, 1993: 65).

In regards to practitioner research, within situativity theory the anthropological perspective is particularly significant. Teachers work for an extended timeframe within their schools and other networks and study groups to research and explore new approaches to teaching and learning in collegial groups within Communities of Practice, as will now be outlined.

Communities of Practice

Wenger (1998) acknowledges the range of communities in which individuals participate on a daily basis, such as interest and geographical communities, but he defines Communities of Practice more specifically than these groups using three dimensions. These refer to:

- Purpose: Joint enterprises and values which are understood and continually renegotiated by members over time
- Functions: The mutual engagement that binds long-term members and newcomers into a social entity through regeneration and commitment to shared ideas
- Capability: What is produced and the shared repertoire of communal resources consisting of routines, sensibilities, vocabulary and artefacts produced over time.

A key aspect of Communities of Practice is that they are self-organising systems. Practices reflect the understanding of members about what is important, and the focus is on learning rather than tasks, teams, business units and networks: 'Knowledge is created, shared, organised, revised and passed on within and among these communities. In a deep sense, it is by these communities that knowledge is 'owned' in practice' (Wenger, 1998). Essentially, Lave and Wenger's (1991) concern with learning involved participation in collective life on a daily basis which reflects the informal education tradition, with learning being about social participation rather than acquisition of knowledge (Smith, 2003). Therefore, the focus for learning is on a self-organising system, with leadership being distributed across a network of people, and the learning culture involving ongoing professional development, collaboration, interrogating existing practices and celebrating success (Halverson, 2003).

A significant aspect of the anthropological perspective is the concept of reproduction of the community as new members work alongside competent others in the community of practitioners. Through a process of 'legitimate peripheral participation', newcomers begin as apprentices within the community and through interaction over an extended timeframe, gradually acquire the beliefs of the community, negotiate meanings and move towards a more central position in the community.

Legitimate peripheral participation provides a way to speak about the relations between newcomers and old timers and about identities, artefacts and communities of knowledge and practice. A person's intentions to learn are engaged and the meaning of learning is configured through the process of becoming a full participant in a socio-cultural practice. This social process includes, indeed it subsumes, the learning of knowledgeable skills.

(Lave & Wenger, 1991: 29)

Lave (1997) in discussing the process indicates that this involves newcomers in beginning at the periphery of the group and gradually over time moving towards the centre of the community as individual values and practices become merged. Through this process, reproduction and sustainability of the community occurs as new members are continuously inducted into the group over an extended timeframe.

However, while the legitimate peripheral participation may involve some notion of apprenticeship, Owen (1999) highlights the contentious and sometimes fragile nature of community and the importance of involving a critical analytical process which may be a force for change. Similarly, Grossman, Wineburg and Woolworth (2000), in the establishment of interfaculty secondary school study networks, highlight various stages in the formation of the group, as well as the tension between dual purposes of student learning and teacher learning.

In relating the Community of Practice model to an educational environment, Barab and Duffy (2000) summarise the anthropological perspectives of situativity theory of learning through four key aspects:

- development of self occurs through participation in a community
- common cultural and historical heritage exists, with shared goals, negotiated means and practice and collective stories
- individual identity is connected and interdependent with the community and collective effort
- ability to reproduce as a community through new members working alongside competent others occurs.

While Wenger and Snyder (2000) highlight that Communities of Practice arise naturally and are essentially self-sustaining in nature, Wenger (1998) also indicates that there are considerable benefits to be gained by leadership nurturing of the community. This occurs through involvement of experts and inspirational internal day-to-day leaders and organisers, although the leadership style must ensure that self-organisation is not smothered. Nurturing the learning within Communities of Practice may involve leaders in legitimising participation through creating time for member activities and providing resources.

Initial Communities of Practice research (Lave & Wenger, 1991; Wenger, 1998), while not focused on educational environments, has been increasingly applied in these contexts. In schools, Halverson (2003) notes the role of leadership in nurturing Communities of Practice as involving the creation of social networks and a positive culture of Professional Development while encouraging shared leadership, and examining artefacts such as programs, procedures and policies. Through deconstructing the cultural artefacts of rituals, stories and formal policies which may constrain learning, a new set of artefacts can be developed which support teacher and student learning.

Professional Development within Situativity Theory

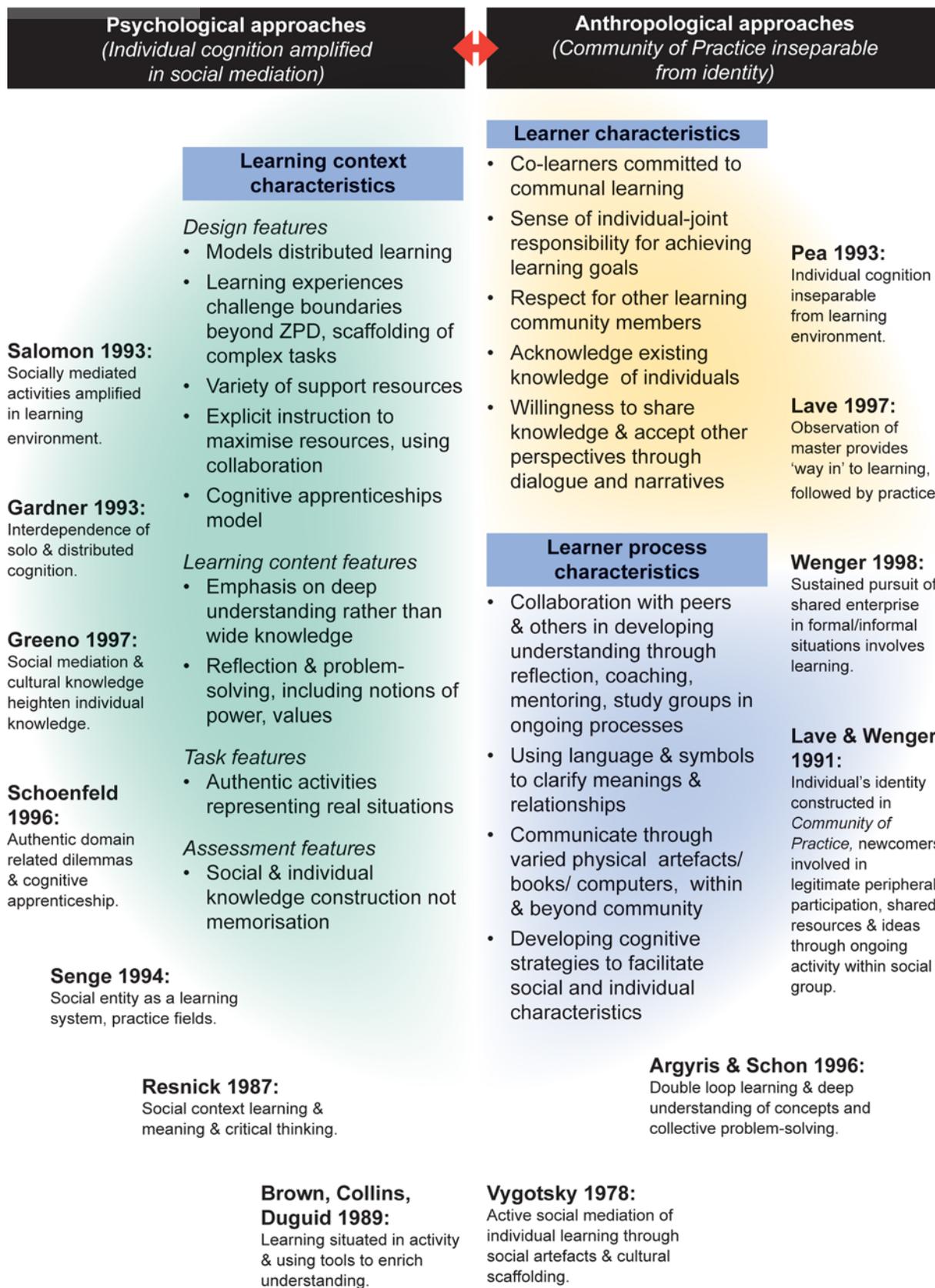
Reflecting Communities of Practice principles in identifying the impact of situativity theory on Professional Development practice in schools, Putnam and Borko (2000) identify three aspects:

- knowledge is situated in particular physical or social environments, with learning involving the individual in interactions with others and with situated materials
- social nature of learning in a discourse community involves shared skills and knowledge as the individual adopts the community's way of thinking, with joint development of Professional Development programs being emphasised
- a distributed learning process across individuals and tools occurs, with a focus on real life learning and socially scaffolded artefacts rather than individual competence and decontextualised skills alone.

Specifically, Steketee, Herrington and Oliver (1999) outline characteristics of the distributed learning environment within a more formal learning situation as including teaching context characteristics, student characteristics and student process characteristics. Similarly, as applicable to teacher Professional Development, Stein (1998) highlights learning grounded in everyday actions; knowledge acquired situationally and transferred only to similar situations; learning as a social process encompassing ways of thinking, perceiving and problem-solving; and learning within the world of action and complex social environments. Content of higher-order thinking, reflection on daily experiences and problem-solving; Context providing values and a culture for examining experience; Participation for interacting and sharing stories and Communities of Practice for providing a setting for social interaction, are significant aspects.

Diagram 2 on the following page reflects these types of characteristics including Learning Context, Learner Characteristics and Learner Process in terms of psychological and anthropological perspectives, and various theorists and authors previously outlined who are significant to this research.

This diagram summarises the situativity learning theory model from the psychological perspective, as previously outlined as represented by Salomon (1993), Gardner (1993), Greeno (1997), Schoenfeld (1996), Senge (1994), Resnick (1987), Vygotsky (1978), and Brown, Collins & Duguid (1989). The anthropological perspective is represented by Pea (1993), Lave (1997), Wenger (1998), Lave & Wenger (1991) and Argyris & Schon (1996).



Adapted from Steketee, Herrington & Oliver (1999), Stein (1998)

Diagram 2: Situativity theory, ZPD and Professional Development within the distributed learning environment

The diagram 2 model indicates that aspects of the Learning Context characteristics include Design features of using varied resources, initially using explicit instruction in maximizing resource potential followed by reinforcement and practice, and modelling distributed learning. Content features reflect Argyris & Schon's (1996) double loop learning and emphasise depth of understanding through reflection and problem-solving. Task features involve authentic problem-solving and Assessment through social and individual construction of knowledge rather than memorisation. Learner Characteristics focus on communal learning and joint responsibility for learning goals, acknowledgement of individual skills, and sharing. Learner Process characteristics include collaboration, using language and diagrams to explain concepts, and employing physical artefacts (Steketee, Herrington and Oliver, 1999; Stein, 1998).

In relation to teacher learning and Professional Development, while the differences between psychological and anthropological perspectives have been presented in terms of individual cognition, the key focus of this paper is situativity theory or situated learning in general. This acknowledges that the most effective learning occurs through interacting with and manipulating the social and physical environment. Wolfson and Willinsky (1998) and Greeno (1997)'s research indicates that the community context in learning is emphasised because in the social context, learning occurs at a deeper level. Therefore, it is easier to transfer knowledge to other environments, although they also recognise the importance of the individual and cognition in the process.

Emerging Professional Development trends research linked to situativity theory will now be presented.

Emerging Trends Research and Situativity Theory

As a high school leader and currently as a statewide officer in the education system, I have had an ongoing role in practitioner research most recently focused on teacher Professional Development. My Doctor of Education studies have involved three interconnected projects including an internet survey of South Australian school leaders for gaining descriptive information of their school Professional Development practices. Case study teacher and leader interviews in three selected schools to gain in-depth information regarding their Professional Development experiences and perceptions and literature searches and interviews regarding emerging trends nationally and internationally have also been involved. Throughout my research I have been situated in various Communities of Practice including as an apprentice within the academic community, within the schools and secondary principal's association and within various groups within my workplace in State Office.

My work has been grounded in the situativity theory, Communities of Practice and the National Partnerships for Excellence and Accountability in Teaching Professional Development standards as previously introduced, with a range of Professional Development models increasingly emerging as effective in teacher learning. These seem to link to five broad themes:

- (A) Joint enterprise and shared beliefs*
- (B) Collaboration*
- (C) Practical activities and artefacts*
- (D) Identity in community*
- (E) Community with responsibility and sustainability*

School-based study teams, mentoring and coaching are some key trends for teacher Professional Development arising from the research and these will be discussed in the next section of this paper.

School-based Study Teams

In my practitioner research using teacher interviews in three South Australian case study schools (Owen, 2003), reflecting situativity theory, there were various models of teachers in teams working

together on a regular basis to enable the development of shared ideas and practices, and deep learning through problem-solving using relevant materials. Self-determination of these teams and faculties and opportunities to identify and implement their own learning needs programs and to take responsibility and coach others occurred, as illustrated in this interview comment:

...we get on well together as a team so that makes a difference ...and we've all done good things. So at the moment we're working on a unit with our middle school kids on legal studies... what we're trying to do is set up a structure that will enable them to follow a process. And S has done this process with her students before over a number of years so the last few team meetings that we've had, have been working through, well what is this unit going to look like. What are we going to expect from the students and what support are we going to give them. And she's been working with us on the way in which she set up her classroom at her previous school. So I guess in a way it's an informal T&D type of session.

(Owen, 2003: Interview 9)

While situativity theory highlights the importance of self-determined teams, the role of leadership in nurturing these teams and restructuring the working day to create more time for teacher learning in Communities of Practice is also raised. Reflecting practitioner research as a powerful form of Professional Development, a leader's comments reflects the school's change process and establishing of teams with ongoing links to whole school directions, while also collecting data as evidence of improved student learning outcomes:

So what that means is that there'd be some whole school stuff as well as teams. ...I guess with team planning, it's still really important that they're working to, you know a plan, and that they're fitting in with the school priorities. So what we sort of do is say, this is what we expect are the outcomes.. But at the end of the year these are the behaviours what we want to see in children's learning. You know it might be more on-task behaviour, it might be kids interacting positively with one another, those sorts of performance indicators. And then, in terms of collecting data about how effective the programs have been, we'd collect data from kids and from teachers. Um, but developing that concept of the learning team driving its own agenda, is something that we're really keen to do.

(Owen, 2003: Interview 11)

However Hargreaves (1992) raises the issues of schools cultures which have been traditionally focused on either individuality of teachers or balkanisation into competitive faculties, and the potential for 'contrived collegiality' for administrative reasons rather than true collaboration. While leadership support for teachers provides a context for the success of all types of programs, essentially these activities are conducted in an environment of self-determination with those involved taking control of their own learning.

Jazabkowski (2001) outlines that while initially teams may be established by school leaders and appear to reflect contrived collegiality for administrative purposes, over an extended timeframe social and emotional bonds within the team develop through shared experiences. Furthermore, she notes that congeniality is a feature of many teacher interactions and committees in schools but by building social and emotional bonds including additional informal contacts, teachers begin to feel comfortable in their learning community to expose and to debate different perspectives about a topic. The negotiation process was raised in the case study interviews by one teacher as follows:

When you work as a team, you hear about different perspectives on things. You sort of have to sit back and look at something the way someone else is looking at it. Because quite often we have

discussions about the particular philosophy or the vision that we all want to adopt ...And one person has a strong feeling about that and another person has another strong feeling about that and you try to come to some negotiation. And it's interesting because you might not have thought about it from that point of view... I mean it forces us to negotiate and compromise.

(Owen, 2003: Interview 8)

Through this process within the joint enterprise of their faculty, subject or year level team interactions and ongoing contacts of shared ideas over time and the lively debate, sharing and respect for differing perspectives, transformational educational experiences emerge. In the interviews, teachers talked about more student ownership of the curriculum, a wider variety of teacher involvement, reorganised time for specialist support for small groups of students, also capitalising on teacher expertise and restructuring the student workday to capture interest as indicated in this comment from a school leader:

...the foundations are now starting to emerge and becoming more and more visible of a culture in the school which is allowing us to build up a team approach to teaching and learning... It hasn't been without its problems and dangers but I think we're now starting to walk the talk in terms of having an early years environment which has broken down some traditional practices e.g. the one to thirty, one to twenty six type of arrangement. We're now working more as a team and the teachers are now looking at that cohort of students as a group and then breaking them up into all sorts of different ways for different types of activities and areas of learning and so on.

(Owen, 2003: Interview 6)

Some of the interview schools were certainly moving beyond using collaboration as an organisational tool and seeking to engage teachers in collegial activities focused on student learning, interrogating the taken-for-granted and developing a critical approach and action. For example, teachers at Lakeside, a new school, made particular mention of a culture of interrogating traditional schooling processes, in a process of transformative education. As one teacher indicated about the school's culture: 'no-one's ever said to me before, why can't it be different... Whereas that question is constantly being asked here' (Owen, 2003: Interview 8).

However, various researchers (Lave and Wenger, 1991; Smith, 2003) have raised the issue of the community stifling new ideas and becoming insular. Guarding against the potential insularity of Communities of Practice, while at differing stages of community development, all of the case study schools had mechanisms for the interjection of external ideas. These include funding regular attendance of large numbers of staff at an ongoing series of pedagogy sessions which involved inspirational speakers and discussion and also funding groups of staff for interstate and overseas school visits linked to ongoing programs. The after-school meeting rotation for the shortened school day in the secondary school case study included time for individuals to share external conference ideas in interest groups. Therefore, there was an awareness and action to address this issue of insularity and to support teacher professional communities changing over time. The community also evolves and changes through multiple community involvement such as staff attending professional association and other study groups and university courses and external conferences and site visits. New ideas and occasional guest presenters are used to challenge existing practice with opportunities provided for follow-up support within the school community.

Therefore my research is not indicating that one-off conferences or guest speakers have no role in teacher Professional Development but the key issue is to connect workshops and experiences to other events such as teams and whole school directions to ensure transfer of learning and educational change. Through the common focus and beliefs, it is important that individuality is not stifled but that new ideas are accommodated through members' involvement in overlapping communities and accommodating the multiple tensions, with action and change in teaching practice subsequently occurring.

The significance of these teams and practitioner research is that by reinforcing the effectiveness of teacher Professional Development occurring through democratic learning experiences within situativity theory and Communities of Practice, the identity of teachers as professionals is highlighted. Sachs (2003) views this as re-establishing the activist teacher professional identity and reinforcing a reform agenda dominated by discourse about the collective expertise of the teaching profession. This is in opposition to traditional Professional Development conducted in one-off conferences by experts in isolation from a particular context, which Sachs (2003) links to the deskilling of teachers and the managerialist agenda.

Gallucci's (2003) work on the impact of teacher learning teams on teachers' responses to standards-based reform indicates the influence of these communities in supporting colleagues to make changes in pedagogy. Corrigan and Groundwater-Smith's (2002) research is also relevant in highlighting the forensic approach to evidence of gaining a deeper understanding of the issue and similarly, Mockler's (2002) evidence-based practice within practitioner inquiry which can be related to situativity theory and the impact of Professional Development.

Working within truly collaborative teams, teachers act as practitioner researchers, collecting data, sharing perspectives and taking responsibility for collective learning, with newcomers being supported through mentoring.

Mentoring

Brown, Collins and Duguid (1989) and Barab and Duffy's (2000) situativity theory learning models highlight the responsibility of the community for new members. Mentoring is a process of effective Professional Development where beginning teachers and leaders are supported to learn new skills. Mentoring involves:

...a nurturing process in which a more skilled or more experienced person serving as a role model, teaches, sponsors, encourages, counsels and befriends a less skilled or less experienced person for the purpose of promoting the latter's professional development.

(Alberta Teachers Association, 2001, citing Anderson, 1987)

Lave's (1997) 'legitimate peripheral participation' within Communities of Practice outlines that this involves newcomers in beginning at the periphery of the group and gradually over time moving towards the centre of the community as individual values and practices become merged. Through this process, reproduction and sustainability of the community occurs as new members are continuously inducted into the group over an extended timeframe. Similarly, in discussing the process, Owen (1999) and Ghafaili (2003) indicate that cognitive apprenticeship involves various aspects such as exploration of new ideas, reflection, modelling by experienced members, observation, scaffolding to gradually master complex tasks, and being a force for change rather than servitude.

In my practitioner research where learning has been shared with school leaders, professional associations and some communities in my workplace, in researching emerging trends I have highlighted various researchers (Black, 2001; Feiman-Nemser, 2001; DEST, 2002) who have indicated the importance of mentoring in beginning teacher induction programs. Washington State, Colorado, Illinois, Kansas, Ohio, and Wisconsin have introduced mentoring programs for beginning teachers in the past five to ten years, with mentoring programs varying from one state to another. For example, the Colorado program involves full-time release of mentors for three years, with each mentor being assigned about fifteen new teachers, and meeting and conducting classroom observations at least weekly. Retention rates for new teachers have now increased from less than 70% to 91% after five years (National Educators Association).

In my research, beginning teachers and leaders being mentored seemed to result in successful and supported learning of new skills and understandings. This was especially evident where mentor training was provided and care was taken to ensure the individual uniqueness of the protégé was the

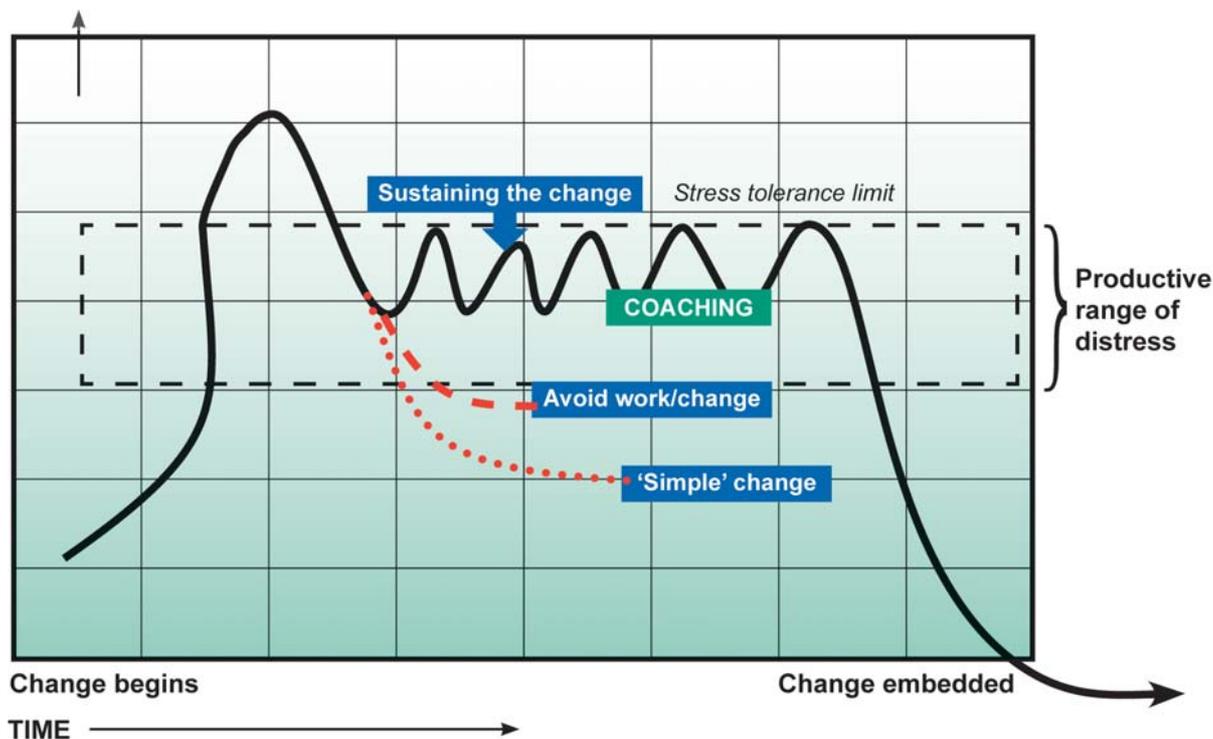
focus, rather than a mentor clone. Similar to other Professional Development based on situativity theory models, this suggests that mentoring needs to be a collaborative exercise that allows the individual to be actively engaged and self-directing in the process.

The emergent trends literature searches and program leader interviews also showed that in the United States, mentoring is being used to up-skill not only beginning teachers but also current and future leaders through the support of a more experienced leader. This involves providing job-embedded training for site administrators to deepen their leadership capacities through a regular close working relationship to address current instructional issues and develop practical applications. For example, in the San Diego district in California, a mentoring program has been introduced using highly experienced school leaders who work with new principals to build skills. They attend each site on a bi-weekly basis to give feedback on staff conferences, conduct teacher coaching sessions and participate in parent meetings. The goal is to develop a collegial relationship through conversations, discussion and problem-solving sessions about the school site and instruction practice, rather than evaluate the principal. Walkthroughs, intra-district visitations and teacher pairings have been successful strategies. Walkthroughs involve short observations in classrooms with time spent debriefing at the end of each session, looking at student engagement, classroom environments and pedagogy. Follow-up discussions regarding observations, identification of trends and steps for improvement, also staff Professional Development and demonstrations, are involved. The mentor principal, because of their cross-district role, can also set up intra-district visits, thus overcoming the isolation of school leaders who may become insulated. The mentor develops a deep knowledge of district reforms and can match administrators and groups. Individual teacher pairings can also occur with teacher strengths recognised and walkthroughs used to 'capitalise on differences in expertise, predict failure in the social isolation of practice and create interdependencies that stretch over these differences' (Barry, 2002, citing Elmore).

Another emergent trend in teacher Professional Development which connects to situativity theory is coaching.

Coaching

My research involved literature reviews and emergent trends interviews with project leaders and this has highlighted the power of coaching in ensuring effective teacher Professional Development. Coaching connects to situativity theory and Vygotsky's ZPD because it operates through a collaborative process of sustained support from the coach which is essentially controlled by the individual. A complex change is broken into manageable steps as the coachee indicates readiness and the coach's role being one of asking skilful questions. Coaching 'deepens your understanding and moves you from where you are to where you want to be' (Hoult, 2003), with coaching involving regular support until there is a change in cognition and behaviour as reflected in Diagram 3:



Adapted from Hoult (2003)

Diagram 3: Sustaining the change through coaching

This diagram indicates the initial high degree of stress in the early stage of a change process and the role of coaching in providing regular support while the change is implemented. Coaching ensures that the stress becomes more manageable, with the change event gradually being embedded and coaching then being suspended. Malone (2001) outlines the process of coaching being that coaches facilitate and challenge destructive thinking, encouraging the coachee to recognise and understand their thought patterns and internal self-talk. The coaching process involves guided mastery and creating opportunities to be successful at new activities, including verbal reinforcing and gradually increasing task complexity, with progressively greater effort occurring by the coachee to ensure success. Change is therefore carefully managed through the coaching process, with care taken to support psychological well-being through the coach encouraging the employee within reasonable stress boundaries (Malone, 2001).

Coaching for school leaders is a significant Professional Development trend in the American education system to ensure a process of managed change. For example, the Small Schools Network and Coalition of Essential Schools in America is based on the learning communities concept of subdividing large schools, particularly secondary schools, into smaller operating groups, each frequently having its own culture (Coalition of Essential Schools). One of the key supports provided by private foundation money for Coalition of Essential Schools member schools is the provision of trained coaches to support leaders and teachers to restructure schools and to improve teaching and learning. For example in Washington state, retired principals are hired and trained as coaches, with around 40 coaches helping 90 schools. The coaches meet together for two days a month to work on their coaching skills through reading and discussion about understanding change, equity and closing achievement gaps, using data to inform school decision-making, getting the community involved and teaching and learning. The role of coach is to bring technical expertise and to give an external perspective as schools restructure into smaller units, working with the principal to ask questions rather than giving advice. The coaches work for at least one day a week in each of the assigned schools and facilitate meetings, find resources, use surveys to establish student learning or school climate data, analyse data, and ask probing questions. In addition, Coalition school leaders also network together for a two day retreat about three times a year using the funding provided (Reeder, interview 7/1/03).

As an example of deep learning within coaching, in researching effective Professional Development, Becker (1996) highlights the power of various models of coaching including peer

coaching and cognitive coaching, with regular support being provided to the individual to experiment and gradual changes in practice and in thinking occurring. Similarly, in comparing teacher Professional Development models and the transfer of new ideas to the classroom, Joyce and Showers (1988) research indicates theory alone such as that informed by behaviourist learning model, resulted in only 5% transfer to the actual work environment, with 20% transfer when theory, demonstration and practice were involved. However, reinforcing the situated learning theory model, when theory, demonstration, feedback and coaching were all included in the learning process, ninety percent transfer of the new material occurred, thereby highlighting the power of coaching, mentoring and collegial interaction.

Conclusion

This paper has highlighted situativity theory as a theoretical lens to examine teacher Professional Development which is increasingly connected to collegial learning within a particular group involving engagement in relevant practical activities over an extended timeline. Through these learning communities or Communities of Practice, shared values and practices evolve and individual identity becomes intertwined with the group, with community members taking responsibility for the learning of others. Related to Vygotsky's Zone of Proximal Development, individual cognition occurs as a result of the social mediation process, with emerging trends in teacher Professional Development highlighting study groups, mentoring and coaching.

Through these collegial learning processes over an extended timeline involving critical examination of classroom and school practices and practitioner research, not only do teachers engage in effective Professional Development and learning for themselves, but educational transformation occurs.

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