Chapter 9
Gamestorming the Academy: On Creative Play and Unconventional Learning for the Twenty-First Century

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Abstract Studies show that businesses the world over are looking for more creative managers, and creativity requires an innate ability to play with problems, scenarios, methods and possibilities and to make mistakes whilst doing so. Moreover, the new generation of knowledge workers will be required to fathom and negotiate more complex, networked, dynamic and open problems. They will need to navigate unknown spaces and challenges that currently don't exist. This chapter looks at how tertiary institutions can respond to the needs of the future workforce by creating a more creative curriculum that goes beyond the teaching of expert knowledge and fact: a curriculum that uses play, and frameworks for discovery, to educate students in that ability to navigate the unknown. If students can begin to feel comfortable within the liminal, divergent phase of discovery, and liberate themselves from thinking only in the standard convergent, linear ways privileged in universities, they would be far better prepared for the big challenges ahead.

9.1 Gamestorming the Academy: On Creative Play and Unconventional Learning for the Twenty-First Century

> In different words, every [creative] person we interviewed said it was equally true that they had worked every minute of their careers, and that they had never worked a day in all their lives.' Creative people experience 'even the most focused immersion in extremely difficult tasks as a lark, an exhilarating and playful adventure. (Csikszentmihalyi, 1996, p. 106)

Creative people know how to play, as observed by psychologist Csikszentmihalyi, who researched over 800 creative thinkers across the arts and sciences, from poets

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to scientists to visual artists and novelists, to uncover practices that may be common to all of them. One of his most striking observations was that creative people overwhelmingly report that they don't feel as if they're working at all – indeed, they can devote years of their lives to fruitful 'labour' that is of great value to our society, yet still feel as if they haven't 'worked' a day in their lives. His ensuing provocation is that we could all have the ability to enjoy our work as if it were play, and our lives would be transformed in the process, but we rarely do (Csikszentmihalyi, 1996).

This chapter focuses on the ability of our tertiary institutions to rise to Csikszentmihalyi's provocation above and provides an understanding of how to make learning within the university environment more playful and therefore more fulfilling. In order to do this, it is necessary to examine the ways of thinking that enable a more playful approach and discover the value of these practices in the future workplace.

As we move into the twenty-first century, there has been increasing discussion about the importance of the knowledge worker. Knowledge workers are defined as people whose tasks are nonroutine – they have to combine divergent and convergent creative thinking skills to solve atypical problems that arise on the spot with increasing regularity (Reinhardt, Schmidt, Sloep, & Drachsler, 2011).

The world needs more of these types of thinkers, as evidenced by the 2010 Global CEO study. IBM interrogated 1500 CEOs from 33 industries to 60 countries before claiming that creative thinking skills were the most important qualities required for businesses in the twenty-first century. In drawing conclusions, IBM stated that 'more than rigor, management discipline, integrity or even vision – successfully navigating an increasingly complex world will require creativity' (IBM 2010). So if we know that creative intelligence is of utmost value to our workforce, and we also know that the world's most creative people see their work as 'play', then perhaps it might be worth promoting play in our schools and universities.

Yet play has an awkward place in the academy. In pre-school it's welcomed – children are in a veritable Garden of Eden, where play is necessary, even and encouraged. These are the years when learning takes place so rapidly, yet our young learners are blissfully unaware that they are learning anything at all. They haven't yet taken a bite at the apple of knowledge, which changes everything forever. The apple hangs, waiting for its moment to come, knowing the inevitability of its allure. Once bitten, the child is then banished from this garden of play and sent off to 'work', and there is a sense of punishment that accompanies the departure from Eden, as work comes with a raft of concomitant demands, rules and a process of knowledge acquisition that is often needlessly arduous. A few years down the track, as students proceed to their various high schools and universities, the learning environment for most students becomes far less playful, as does the educational delivery model, a fact that has been sadly noted by many critical observers such as Robinson (2007) and Seelig (2012).

There are many reasons for this expulsion from the Eden of play. Most significantly, once the apple has been bitten, we have entered the world of knowledge, and left the world of pure being, and our institutions haven't yet developed a curriculum to nurture being, which is too intangible – too hard to test and quantify. When this

world of being is left behind, students are taken out of themselves and into the domain of others. Knowledge requires experts, and their expertise needs to be protected and valued and commoditised. Play does not sit well within this paradigm, as it is harder to quantify, justify or own.

The 'work' of the academy has traditionally required logical, linear thought processes. The academy prides itself on its rigour, and yet creativity is often purposefully lacking in rigour, at least in its initial stages. According to Nachmanovitch (1990) in his book, *Free Play*, when you improvise or play, the rules have to relax. If rules were to relax at most educational institutions, there would be a sense of disorientation too great for the system to bear, because embedded in these rules is the notion of a struggle to achieve, as evidenced in student assessments, exams, lectures and tutorials. Here we have the traditional notion of 'work' – of labour borne of late nights, tears, deadlines, benchmarks and harsh criticism. It is hardly surprising, then, that creative play is discouraged. Indeed, degrees that celebrate a less rigorous, rule-bound educational approach, such as creative doctorates, have been described as the 'gatecrashers at the university's dinner party' (Paltridge, Starfield, Ravelli, & Nicholson, 2011, p. 92).

When 'playing' you often have to unlearn what you've learned through years of a more traditional education, and this can be challenging. Freeing up the process of playful thinking is a little hard if students are used to delivering mostly structured, convergent ideas that travel down regular, well-worn paths. One of the hardest things to overcome for students is the need for right/wrong answers. Educators have noted that students want to be guided to right/wrong answers, even when learning a subject such as creative writing (Brophy, 1998). And yet, creators and innovators, at least in the early stages of play, truly need to let go of the notion of correct or incorrect solutions in order to explore the full gamut of possibilities.

A new degree that challenges traditional pedagogy and teaches students to play with problems and possibilities is the Bachelor of Creative Intelligence and Innovation (BCII) at the University of Technology, Sydney, and it is this degree that will be used as our data set – or at least as a way of understanding how play can be introduced into the university environment. The BCII combines with over 18 disciplines so that students from every faculty at the university, from science to engineering, business, law, information technology, health, design and arts and social sciences, can immerse themselves in the capabilities that innovators, rule breakers and change makers, as well as blue chip companies the world over value today (IBM 2010). With a mandate to ensure that no student graduates the same, and an aversion to right/wrong solutions, BCII students are introduced, for example, to mistake-ism – the notion that mistakes have often driven innovation –the mindset that we have to allow ourselves to make mistakes and take risks in order to create anything at all. Innovators play with possibilities rather than putting up with the first obvious solution and will often make mistakes in the name of progress. In the words of De Bono (2010, p 76), 'The need to be right all the time is the biggest bar there is to new ideas. It is better to have enough ideas for some of them to be wrong, than to be always right by having no ideas at all'.

So in the BCII, students are taught the importance of resilience, occasional failure, calculated risks and the implications of failing faster across the disciplines. They are taught to map their ignorance, not just their knowledge (an approach that some in the academy might consider positively heathen), because without ignorance we wouldn't be able to delight in the play of discovery.

Yet our more progressive industries, like those in Silicon Valley outlined below, are breaking the mould and embracing play. Why? Because they're realising that play sparks lucrative innovation. Seeing the necessity of play, they have installed it in their policies. Play has become a statement – a differentiator. Workers can come down the stairs on a slide if they wish at Google's headquarters in San Francisco. Silicon Valley has been ahead of the rest of the world in formulating an environment that fosters play, possibly because they can see that creating a more alluring, meaningful environment, rich with possibilities, might bring more meaning to work – might even help companies attract and retain staff. Google has also promoted the ability for staff to 'play' whilst at work through their '20 % time' policy, which allowed employees to devote 1 day a week to play with innovative projects of their own design. Allegedly this brought us Gmail and Adsense, which now account for 25 % of Google's $50+ billion annual revenue, and is described by many commentators and tech bloggers as Google's most famous and imitated perk (Tate, 2012).

According to one of the grandfathers of sociology, Max Weber, capitalism was founded on the Protestant work ethic. Work and conservative attitudes to labour and profit played a major part in the western world's success ([1904] 1958). And yet, in the age of knowledge workers, it appears that play can be equally profitable. According to Huizinga, in his classic treatise on play, *Homo Ludens*, 'play only becomes possible, thinkable and understandable when an influx of mind breaks down the absolute determinism of the cosmos' (Huizinga, 1955, p. 3). Similarly, the absolute financial determinism of 'work' must be broken down in order for businesses today to experience the innovative potential of play.

Another reason why play is becoming more important is that businesses no longer have straightforward goals, but rather 'fuzzy goals', where answers are unknown and new solutions are always being sought (See Fig. 9.1). Play allows businesses to explore the unexpected – what innovation expert, Johnson (2011), explores as the adjacent possible. Gamestorming in the business world is proposed as a way of discovering these fuzzy goals.

Goals are not precise, and so the way we approach the challenge space cannot be designed in advance nor can it be fully predicted. Whilst a business process creates a solid, secure chain of cause and effect, gamestorming creates something different: not a chain but a framework for exploration, experimentation and trial and error. The path to the goal is not clear, and the goal may in fact change (Gray, Brown, & Macanufo, 2010, p. 5).

Organisations today are discovering that convergent ideas that travel down regular, well-worn paths are no longer working in the contemporary, networked, complex, open environment of constant disruption (Dorst, 2015), so play provides a new model for accessing solutions sideways – connecting with the adjacent possible. The notion of fuzzy goals is expressed in the diagram below by Gray et al. (2010)

**Fig. 9.1** From Gray et al. (2010, p. 6)
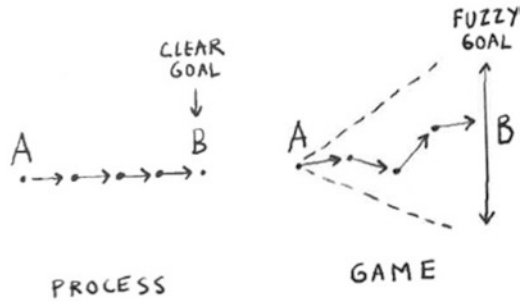
(Fig. 9.1). Play is the ideal way to access these unknowns in the future workforce, and there are many businesses and governments worldwide that have invented, adopted and adapted 'gamestorming' techniques to help them explore possibilities and uncover innovative ideas. Indeed, Gray et al. have made it their mission to track down the origins of these games in business and find their inventors. Similarly, Michalko's (2006) book, *Thinkertoys*, explores creative games or 'methods' that uncover unusual solutions, and he has taught these games to corporate and military clients. Interestingly, the notion 'play' and creative intelligence are particularly relevant to the military, who have to deal with ambiguous and volatile environments and understand that straightforward thinking only delivers standard outcomes that can be easily predicted and foiled. Ideas such as these expressed in *Gamestorming* help forge new ground, and as education should foster an ability to go forward into new ground fearlessly, it's worth exploring innovative ways to trial gamestorming in the academy.

In the BCII, students are encouraged to explore the problem space in multiple ways that subvert regular, linear thought processes. Students play by constructing their own methods to tackle complex client briefs, for example. They are encouraged to take ideas 'for a walk' – to make conceptual leaps in their thinking. They trial speculative 'what-if' scenarios and construct 'straw man' proposals and thought experiments. They do *think tanks* and *hot housing days* to explore problems in teams at greater depth. They experiment with problematisation – a method from cultural studies that enriches the problem space rather than simplifying it, for example – all to slow down the process of getting to the 'right' answer too quickly. This, in turn, allows students to explore a playground of possibilities.

9.2   The Game as Journey

Play is often random and unstructured (Huizinga, 1955), but the game, as deployed by innovators, gives loose, informal structure to the random, unstructured process of play, without restricting its possibilities. Give play structure and it can find acceptance more easily in the academic or business context. Gray et al. (2010), after collating games used to innovate around the world, came up with a three-act structure

Fig. 9.2 From Gray et al. (2010, p. 10)
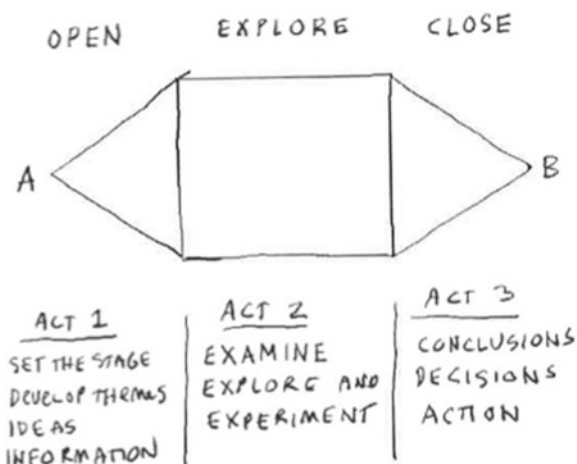
to describe the phases of a game (see Fig. 9.2). The gamestorming process, according to them, is as follows: the opening of the game – the first phase of the journey – is the expansive or divergent moment. The exploring phase is set aside for playing with questions, methods and concepts and seeing how ideas and possibilities connect and combine. Once this has taken place, a third and final phase takes place – the game needs to be closed. At this moment in time, we need to hone our ideas – it's a time for convergent thinking.

The interesting thing about this three-act structure is that it mimics the narrative journey of discovery used so successfully by Hollywood, as described by Vogler (2007). The three-act structure allows for a powerful exploration of human potential through storytelling.

It also allows a certain freedom in the exploration phase – a liminal space where anything can happen. French ethnographer, Van Gennep ([1909] 1960), used a similar map to describe ritual space, whereby tribal rituals allow for 'players' to be taken out of their usual context into a kind of liminal space. For example, in a tribal context, a young boy may be removed from his tribe by an elder for an initiation. With both ritual and the 'game', the discovery of something new is the aim, together with an exploration of the unknown. Similarly, Campbell (1993) describes the ordeals of the hero in mythologies worldwide as a journey of discovery. The hero leaves the known world to enter a liminal space where the usual rules no longer apply, and only once they have discovered their purpose in that space do they return, often with a gift they can share with humanity.

A game has a similar structure. A context is created for discovery – the kind of discovery that cannot be explored through linear, rational, convergent, everyday thinking alone. This context is not ordinary. Like a ritual that takes an initiate into unknown territory, it has to allow the people having the experience to make discoveries for themselves. Like the journey described by Campbell, the person in the 'game' (in this context a learning experience) is able to return with some knowledge
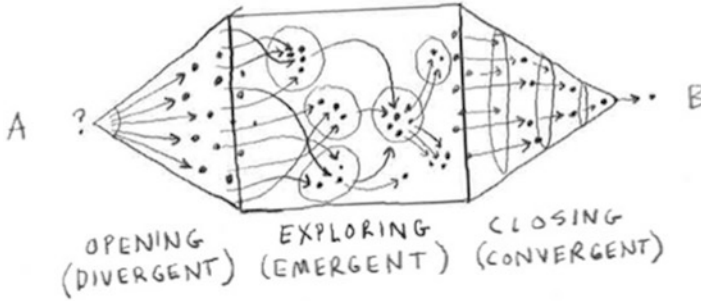
Fig. 9.3 From Gray et al. (2010, p. 12)

that is uniquely useful for them. What is discovered is versatile, enlivened knowledge that's fit for purpose. And so play becomes a powerful way to capture the unknown and explore innovative new territory in a business or an academic context.

In the Bachelor of Creative Intelligence and Innovation, students are exposed to a host of playful methods and practices from across the disciplines that cater to all stages of this 'gamestorming' process. They are also presented with the provocation that there are some ideas that can only be expressed visually. The map that Gray et al. (2010) have produced in *Gamestorming* (Fig. 9.3) visually identifies some of the forces at work in all three phases – including the liminal 'free play' that takes place in the exploring or emergent phase.

In the BCII, in the 'opening', or the divergent stage of discovery, students are introduced to diverse ideas of how to solve problems, for example, the notion of problematisation or proliferation from cultural studies, as mentioned earlier – the idea that a problem space is enriched rather than reduced to prevent over-simplistic enquiry. Students examine the causes of problems using a wide variety of lenses. They unpack the problem space through deeper questioning. For example, Gray et al. (2010) write about 'fire starting' questions that might allow for divergent ideas. These include the following types of questions:

- What kinds of things do we want to explore?
- How would you define the problem we are facing?
- What are your biggest problem areas in your institution/corporation?

Opening (divergent) questions, according to Gray et al. (2010), are all about opening up to possibilities – they are posed as a way of putting cards on the table and including many 'players' to tackle the task at hand. The notion here is that games help to source the best ideas of the group by exploring the potential of that group to ideate in this liberating, divergent space.

In the BCII, students are introduced to 'beautiful questions' as described by innovation expert, Berger, in *A More Beautiful Question*. Berger describes how these questions should be actionable and related to something that intrigues you, as

a researcher. He describes 'beautiful' questions that have led to great innovations, such as the following (Berger, 2014):

- Why should you be stuck without a bed when I have a spare air mattress? This is the question posed by Airbnb, now a company worth over $10 billion.
- What if countries competed on playing fields instead of battlefields? This is described as an Olympic-worthy question.
- Daddy, why do we have to wait for the picture? This was the question asked by the 3-year-old daughter of Edwin Land, the inventor of the Polaroid camera.
- 'What if we could paint over our mistakes?' This was a question asked by Bette Nesmith Graham, who worked as a secretary by day and an artist at night. She invented Liquid Paper, which she later sold for close to $50 million.

The next phase is that of exploration – the emergent phase that allows players to connect and combine ideas, look for patterns and see old situations with fresh eyes by liberating themselves from the standard methodologies and allowing for a sort of 'free play'. This is where surprising and delightful concepts, ideas and ways forward can emerge. Questions in this phase can be experimental. For example, you can ask 'what ideas here connect'? Or 'is it possible to make random connections'? Or 'how can we ask our question in a new way'? Or 'how can we reverse and challenge assumptions'?

Gray et al. (2010) also explore the notion of 'examining questions' that allow for exploration, such as:

- Which ideas are working well?
- Can we take any of these ideas further?
- Can we create an example of that?
- Can we apply a creative method that would help us explore that concept any further?

In the Bachelor of Creative Intelligence and Innovation, students play with a series of exploratory methods from across the disciplines in this expansive phase, such as the following:

- Paper prototyping – a method from IT and engineering that involves prototyping processes using Post-it® notes.
- Mapping and visualisation – everything from cartographic mapping using metaphor, to data visualisation of statistics to prompt discovery.
- Method cards – a compilation of observational methods from the seven faculties at the university and a large combination of disciplines.
- Framing – a design thinking methodology whereby a problem is reframed to present and provoke lateral solutions.
- Empathy – using methods such as 'a day in the life' to imagine the needs of users.
- Sandpit experiments with a random mash of techniques – here students are encouraged to create their own methods through a 'bricolage' or combination of

different methods and then explore which methods from the various disciplines are best for tackling the issue at hand.

- Thought experiments – whereby students use their imagination to test hypotheses.
- What-if scenarios – a way of challenging assumptions and ideating by imagining new possibilities
- Speculative research proposals – a way to test and iterate an idea through conceptual thinking alone.

As part of a mapping session, BCII students also differentiate between the 'explorer' and the 'guide', a notion introduced by Peter Turchi in *Maps of the Imagination* (2004). As an 'explorer', you are free to make mistakes, to not know, to discover by trial and error. Only further down the track are you obliged to become the guide, who is able to lead others through the same process.

The ability to 'not know' is considered vital by educational theorist Barnett (2004), who writes about the challenges of a post-modern world where super-complexity is the new norm. He writes about the necessity to train students for an unknown future, with unpredictability at its heart. According to Barnett, students will be entering 'a world that is radically unknowable: even though we may make modest gains here and there, our ignorance expands in all kinds of directions…we never can come into a stable relationship with the world' (Barnett, p. 68). The emergent phase of the game, and the concept of the student as explorer, helps students to overcome the limitations of knowledge and prepares them for the radically unknown.

Finally, the convergent phase allows us to close the game. This phase is about moving towards conclusions, decisions and follow-up action. It's about applying the critical eye, choosing which opportunities would be worth exploring further – in creative writing, for example, it's about 'killing your darlings', those beautiful words that ultimately aren't useful to the overall narrative. BCII students play with techniques that allow for this type of closure.

9.3   The Road Ahead

With its silo departments and faculties, the academy is ill-prepared to equip students for an environment of super-complexity – an unknown future, where graduates are predicted to be moving through up to 14 different jobs by the time they turn 38 (GrrlScientist, 2010), with many of these jobs yet to be invented. In this environment, knowledge becomes far less important, according to Barnett, and we should be educating students in 'being' not just 'knowing'. There needs to be a major shift from epistemological models of education to ontological models (Barnett, 2004). Play provides the opportunity for students and ultimately, graduates in the future workforce, to move from the limits of knowledge to pure being – back to the Garden of Eden and its creative potential. It allows them to sit more comfortably at the precipice of the unknown and manage the uncertainty of those future spaces.

The revised Bloom's hierarchy states that creativity is the highest achievement in learning, well above memorising, evaluating or analysing (Anderson et al., 2001). Industry also states that creativity is the most important quality for senior management to nurture (2010). If this is the case, then we have a duty, as educators, to allow for the possibility of play in our institutions, because it develops a mindset that allows creativity in all disciplines to flourish.

It's all too easy to divide learning into so-called 'creative' and 'uncreative' subjects, but with a future that demands transdisciplinary practices, and where innovation is said to take place between fields, not just within fields, it's important to ensure that everyone graduating today understands the potential of play and the power of creative thinking.

It's easy to leave creativity to the creative types and say to yourself, 'I'm just not a creative person'. The fact is that in a complex, dynamic, open, competitive knowledge economy, it's no longer acceptable to take this position. If you are a knowledge worker, you must become, to some degree, creative (Gray et al., 2010, p. xvi).

It takes a lot to disrupt the academy, but given that disruption is rampant in the workforce (Christensen, 2013), it's probably time that more institutions begin teaching transdisciplinary, creative degrees that nurture graduates for a future that is more unknown now than it probably ever was. A future where finite knowledge will be less useful, and a playful ability to adapt and innovate will make all the difference.

References

Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., et al. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives, abridged edition*. White Plains, NY: Longman.

Barnett, R. (2004). Learning for an unknown future. *Higher Education Research & Development, 23*(3), 247–260.

Berger, W. (2014). *A more beautiful question: The power of inquiry to spark breakthrough ideas*. New York: Bloomsbury Publishing USA.

Brophy, K. (1998). *Creativity: Psychoanalysis, surrealism and creative writing*. Melbourne, Australia: Melbourne University Press.

Campbell, J. (1993). *The hero with a thousand faces*. London: Fontana.

Christensen, C. (2013). *The innovator's dilemma: When new technologies cause great firms to fail*. Boston: Harvard Business Review Press.

Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention* (1st ed.). New York: Harper Collins Publishers.

De Bono, E. (2010). *Lateral thinking*. London: Penguin.

Dorst, K. (2015). *Frame innovation: Create new thinking by design*. Washington, DC: MIT Press.

Gray, D., Brown, S., & Macanufo, J. (2010). *Gamestorming: A playbook for innovators, rule-breakers, and changemakers*. Sebastopol, CA: O'Reilly Media.

GrrlScientist. (2010, Oct 21). Shift happens. *The guardian* [online] http://www.theguardian.com/science/punctuated-equilibrium/2010/oct/20/2. Accessed 15 Feb 2015.

Huizinga, J. (1955). *Homo ludens: A study of the play-element in culture*. Boston: Beacon.

IBM. (2010). *IBM global CEO study: Creativity selected as most crucial factor for future success*. https://www-03.ibm.com/press/us/en/pressrelease/31670.wss. Accessed 15 Feb 2015.

Johnson, S. (2011). *Where good ideas come from: The seven patterns of innovation*. London: Penguin.

Michalko, M. (2006). *Thinkertoys: A handbook of creative-thinking techniques*. New York: Crown Publishing Group/Random House.

Nachmanovitch, S. (1990). *Free play: Improvisation in life and art*. New York: Tarcher/Putnam/Penguin.

Paltridge, B., Starfield, S., Ravelli, L., & Nicholson, S. (2011). Doctoral writing in the visual and performing arts: Issues and debates. *International Journal of Art & Design Education, 30*(2), 242–255.

Reinhardt, W., Schmidt, B., Sloep, P., & Drachsler, H. (2011). Knowledge worker roles and actions – results of two empirical studies. *Knowledge and Process Management, 18*(3), 150–174.

Robinson, K. (2007, Jan 6). Do schools kill creativity? Sir Ken Robinson. *TED Talks* [video file] Retrieved from URL: https://www.youtube.com/watch?v=iG9CE55wbtY on 27 May 2015.

Seelig, T. L. (2012). *inGenius: A crash course on creativity*. New York: HarperOne.

Tate, R. (2012, Jun 12). LinkedIn gone wild: '20 Percent Time' to tinker spreads beyond Google. *Wired* [online] http://www.wired.com/2012/12/llinkedin-20-percent-time/. Accessed 15 Feb 2015.

Turchi, P. (2004). *Maps of the imagination: The writer as cartographer*. San Antonio, TX: Trinity University Press.

Van Gennep, A. (1909). *Les rites de passage*. English edition: Van Gennep, A. (1960). *The rites of passage: A cultural study of cultural celebrations* (trans: Vizedom, M. B. & Caffee, G. L.). eBook published 2011. Chicago: University of Chicago Press.

Vogler, C. (2007). *The writer's journey: Mythic structure for writers* (3rd ed.). Studio City, CA: Michael Wiese Productions.

Weber, M. (1904). Die protestantische ethik und der geist des kapitalismus. English edition: Weber, M. (1958). *The Protestant ethic and the spirit of capitalism* (trans: Parsons, T.). Los Angeles: Roxby Publishing