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The Journal of Organisational Creativity considers articles from a wide variety of interest areas and disciplines where the focus is on the production of creative outcomes that can produce added value in an organisational context. All accepted articles are subject to a double-blind peer review process and are published in a bi-annual issue online. The Journal of Organisational Creativity is free for both authors and readers.

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Welcome to the second issue of The Journal of Organisational Creativity. Our focus is on bringing a blend of academic research and practitioner insights to a wide range of interested readers. We publish original articles relevant to the production of creative outcomes in organisations and encourage papers that include strong implications for management and practitioners which are presented in a section called *Ideas for practice* within each article.

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In this issue we focus on producing creative outcomes in the future. Our first paper by Rouxelle De Villiers, Maree Lockie, Marina Kirstein and Vida Botes, discusses the increasing need for University business schools to produce graduates who are creative and flexible. In our second paper, Philip Dennett and Rouxelle De Villiers share perspectives on creative thinking competencies in Australasian organisations. Tom McLeish makes a case for the poetry and music of science and in our Exploration column, marketing practitioner, Gorgia Brewer, tells us how Gen Z are re-defining how to understand and target audiences.

The next issue will be published in June 2020. For more information go to: http://www.jocreativity.org

*Philip Dennett (Editor), December 2019*
Mind the gap:
Requisite business competencies
Preparing business graduates for their disrupted future workplace

Rouxelle De Villiers, Maree Lockie, Marina Kirstein, Vida Botes

Abstract:
In this era of hyper-competition and accelerated change, university business schools (UBSs) are criticized for “losing their way”. The departure point of this reproach seems to be expectation from stakeholders, including professional bodies, employers and accreditation bodies, that business schools need to deliver graduates with transferrable, employability and professional skills, ready for business, as they graduate. Disenfranchised stakeholders are principally aggrieved about the lack of sufficient focus on employability competencies and in particular soft (general, professional, inter-personal) skills development. Studies of the extant literature indicate a sluggish response to the request for soft skill competencies in business curricula. A meta-analysis of hundreds of current job specifications, reconfirms UBS’s responsibility in this regard. Through thematic analysis, this study develops a three-sector typology of as departure point for curricula re-engineering, and for future research. UBSs and development professionals (HR, managers, performance managers and training-and-development officers) will benefit from the expanded view on enterprise, soft skills and digital competencies (now combined into gaia prima competencies). Finally this study provides recommendations for provide future research agendas.

Keywords: AI, business competencies, employability, EQ, future of work, transferrable soft skills
Understanding the Context of Business Competency Development

Technological advancements and disruptive social forces are transforming the workplace and what the future of work will look like (FYA, 2018). “[B]usinesses are undergoing profound shifts, … business leaders are uncertain if they have the right talent to be successful in this new era of technological advancement” (Deloitte Consulting LLD, 2018; p. 1). The volatility, uncertainty, complexity and ambiguity (VUCA) caused by these disruptive social changes will demand transformative thinking from businesses – forcing business leaders to grapple with the unpredictability of the changing marketplace and workforce. To address the radical changes and disruptive forces, business leaders need to think differently, re-imagine the way work gets done in their organizations, optimize every resource (including individuals and teams), and employ new talent sets to meet the forthcoming changes.

The disruptive forces driving change are, amongst others: (i) the infiltration of data collection and data analytics into business decision making; (ii) organizational changes in business structure, and radical innovation in procedures and systems; (iii) skill gaps and redefined requirements in “talent”; (iv) technological advancements delivering multiple communication and knowledge sharing channels as well as Artificial Intelligence (AI), robotics, robotics and automation; and (v) radical reinvention of business vision and disruptive changes in strategies (Forbes 2016; World Economic Forum 2018; Foundation of Young Australians FYA 2017; Dorr, 2017; Yuen, 2018). The World Economic Forum (2018) reports on the explosion of contingent work, demise or irrelevance of some present skills reporting that the half-life of skills are dropping to “an average of 6 years. This holds true even for fresh university graduates” (p. 1). In addition, continuous shifts in the capabilities and competencies required by dynamic and agile organizations, contingent workforces and off-balance sheet workers (Deloitte Consulting, 2018) to meet changing requirements. New talent sets thus include workers’ ability to contribute to multiple project – agile specialized generalists (Casserly 2012; Phipps, 2012; Silva, Pereira-Medrano, Melia, Ashby & Fry, 2012) able to assemble, adjust and disband project teams quickly (Yuen, 2018). A survey by MYOB (2019) finds that 76% of students see a university degree as important to gain employment in the future. Of the 503 students surveyed (MYOB, 2019) 50% place soft skills and creativity at the top of the list of in-demand skills for the future, alongside collaboration, cooperation and communication; whilst only 41% find hard technical skills such as writing, accounting and data analytics as supportive of their future careers. This study investigates which skills are required by employers and presents the findings in three sections. Section A describes the current business environment and businesses’ competency needs. Section B covers the thematic analysis of current job vacancies. The purpose is to answer a vital andragogical question: Which competencies do formal tertiary education institutions need to develop in business graduates to prepare them for the disrupted future of work?

Section A:
Understanding Businesses’ Competency Needs

The contextual influences impact recruitment, retention, training and workforce decisions organizations have to make about the requisite talent sets they need to survive and thrive in the future (Forbes, 2017). These trends are so impactful that the World Economic Forum (2018) conclude that “business leaders can no longer be passive consumers of ready-made human capital. They need to put talent development and workforce strategy front and centre in their growth plans.” But, is talent development not (largely or at least in part) the job of tertiary education institutions? Is this not why learners elect to complete formal tertiary education before they embark on their preferred career?

In the Future of Jobs Report (2018), authors Schwab and Samans (2018) conclude that many organisations are suffering from talent shortages as a result of a growth in jobs and instability of skills required. Paradoxically, elevated unemployment rates are reported by the International Labor Organization (ILO, 2017); reporting 200 million people were out of work around the world and estimated that youth unemployment would “remain at that level [13.1%]” (p.1). Considering both concomitant trends, are we to arrive at the one conclusion, i.e. that businesses cannot find the right talent to fill their needs? Employers report that graduates lack the requisite skills (De Villiers, 2010; Fan, Guthrie & Das, 2018). Is developing competencies to suit businesses’ talent needs and nurturing the requisite skills not, at least partly, what the formal education sector’s role is in society?

Unfortunately, UBSs and other talent developers, fail students by not delivering the graduate competencies to cope with these changes, and not preparing graduates for “new” employment opportunities. According to McKinsey (Feser
et al., 2017) industry training delivers disappointing results and a proliferation of studies (Bennis & O’Toole, 2005; Gardiner & Lacy, 2005; Reddrop & De Villiers, 2016; Botes & Sharma, 2017; Spender, 2017; Stone, Lightbody & Whait, 2013) indicate the same disappointing results from universities’ challenge to prepare future workers. This is exacerbated by the poor, sluggish, even recalcitrant, response to contextual changes by UBSs (Barac, Kirstein, Kunz and Beukes, 2016; De Villiers, 2010, 2018, 2013; Reddrop, 2012), with doom prophets explicating issues with declarations such as: “How business schools lost their way?” (Bennis, & O’Toole, 2005) and “The end of Business Schools? Less success than meets the eye” (Pfeffer & Fong, 2002; Spender, 2017).

To compound workplace issues, the exponential growth of information technology as enabler and transformer of the way we work, accelerates the need for very different new competencies to succeed at work (Holtgrewe, 2014). The ever-escalating digital revolution (Tapscott, 1996) and the growth of AI and smart robotics as partners to humans in business processes, provide ever growing needs for augmented competencies to interface with and manage smart technology. Various studies highlight the agility that future business-people will need to anticipate, initiate and respond to smart technology (Beukes, Kirstein, Kunz & Nagel, 2018; Kinsinger & Walsh 2012; Mack, Khare, Kramer & Burgartz, 2015) and the rise of automation and AI (Yuen, 2018). Journalists that report on the “gig economy” and “fourth industrial revolution” and various scholars highlight the agility future business-people will need to anticipate, initiate and respond to world events (Kinsinger & Walsh 2012; Mack et al., 2015). Work will keep evolving and the workplace with it. Change will be the only constant in the workplaces of tomorrow, and graduates need to be ready to successfully negotiate those changes and contribute to the wellbeing of business. In sharp contrast to the much-publicized changes in the future of work (De Villiers, 2017; Deloitte, 2018; FYA, 2016/2017), studies report UBS’s inability or unresponsive-ness to provide students with less tangible competencies such as cultural sensitivity, dealing with change and change management in social responsibility. In other words, UBSs delivering on competencies to enable graduates to affect the triple bottom line of companies: economic, social and environmental outcomes (Gardiner & Lacy, 2005; p. 176).

Scholars (Low, Botes, De La Rue, 2016) attempt to answer the question about future competencies required by business and use various methods to determine which requisite competencies business graduates may need. In this study we do not pursue insight into the extent to which UBSs consider it necessary to deliver graduates with work-ready competencies, nor to what quality or standard UBS deliver upon the demand by employers and other stakeholders. This study investigates and limits itself to the pursuit of “what” rather than “if.” This study focuses on developing the comprehension of which augmented skills and attributes are desired, and what current reality is around real demands or requisite knowledge, skills and attributes. In response to the most recent World Economic Forum’s (2018) future of work competencies report, this study also investigates if the top three competencies of complex problem solving, critical thinking and creative thinking are reflected in job specifications in Australasia.

In the next four sections we first discuss the methods used to investigate businesses’ requirements. Second, we investigate two categories of jobs: highly technical (engineering and accounting) and highly people-oriented business careers such as marketing and sales. In the third section we develop a three-sector hierarchy for non-discipline, non-technical skills required to contribute to business in the future. The final section of this paper will summarize the key implications for university business schools, based on the anticipated needs of global business and other primary stakeholders in graduates’ future.

Section B:
Analysis of Real-world, Contemporary Job Specifications

This study considers employers and employer-led organisations, as consumers of graduates, important stakeholders of graduates’ delivered competencies and thus on the content of employability skills development programmes, such as degrees offered by UBSs. This study established which competencies business graduates may need. In this study we do not pursue insight into the extent to which UBSs consider it necessary to deliver graduates with work-ready competencies, nor to what quality or standard UBS deliver upon the demand by employers and other stakeholders. This study investigates and limits itself to the pursuit of “what” rather than “if.” This study focuses on developing the comprehension of which augmented skills and attributes are desired, and what current reality is around real demands or requisite knowledge, skills and attributes. In response to the most recent World Economic Forum’s (2018) future of work competencies report, this study also investigates if the top three competencies of complex problem solving, critical thinking and creative thinking are reflected in job specifications in Australasia.

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Method

This study considers employers and employer-led organisations, as consumers of graduates important stakeholders in graduates’ delivered competencies and thus recent grad-
uates from UBSs. To establish if the claimed demands for new competencies are truly pursued by employers (often via recruitment agencies), a convenient sample of 221 job specifications were analysed to determine requisite competencies in current real-world jobs for business graduates in New Zealand.

This study follows the directions of Ho, Lo and Teo (2013), using a quantitative approach in analysing competency requirements of entry-level business roles, and the investigative approach by France (2010), using real-time job adverts to study accounting practices. This study examined the knowledge, skills and attribute requirements of job advertisements. We examined the competency requirements of businesses in New Zealand, using text-mining software (www.leximancer.com) as research analysis tool.

Sample

The data source chosen were online job advertisement websites, with the largest majority from the website www.seek.co.nz. This website was chosen largely due to the number of job advertisements available, and for the diverse range of job categories. Job advertisements were chosen in uploaded date order (sorted by most recently uploaded) over the period: 18 December 2017 and 19 February 2018). The immutable requirement for all vacancies was that the discipline indicator (for example, “accounting”, “marketing”, “banking”) appears in the job title. We focused our efforts on finding indicators of “entry level” or “graduate” job vacancies by searching for key words such as “limited experience”, “is studying towards”; “new or recently qualified” or “on the way to becoming a qualified accountant”. The final selection was adjudicated by two accounting scholars to verify the selection as meeting the criteria as set out above.

The search yielded 225 results. Job categories selected were: accounting, banking and financial services, general management, human resources and recruitment, marketing and communications sales, retail and consumer products, legal, and engineering. (See Table 1 for the statistics by discipline). Four adverts were excluded due to either having unclear requirements, or specifically mentioning “no prior experience” or “no training”, and thus not relevant to graduate students. Inter-rater agreement of 98.2% (221 out of 225 adverts) resulted on the final database used for analyses. The 221 job advertisements in the final dataset, included accounting, banking and financial services, engineering, human resources and recruitment, legal services, marketing and communication, retail, and sales jobs. It should be noted that many job advertisements could have been classified under multiple job categories.

Results

Overall Map (all job categories)

Our initial (Leximancer) analysis of the 221 advertisements in the full dataset (not sub-divided by functional category) shows most of the frequently occurring concepts. Figure 1 presents the overall map of concepts and themes, with larger size circles indicating the most prominent concept in the concept map. Further, concept maps visually show the strength of association between concepts and the semantic structure of the data. Concept frequency, concept connectedness, and direct and indirect inter-concept co-occurrence is shown as proximity of one concept to another in the map. The first step in the interpretation of the analysis, is identifying themes (indicated by the central position and largest sizes of dots (shaded circles) and the relationships between concepts (indicated by lines between connected themes – 3 lines of copy per ad). We further examine concept rankings to interpret the concept maps and relevance of each concept within the specifications.

Key themes for each of the job categories are indicated as circles; with business support and project management; client and people support; experience in communication and relationship as well as time management and team development; central to the majority of job vacancies in our dataset. The size and centrality of the three dots, business; experience and support indicate the importance of these concepts to all recruiters (as reflected by the job advertisements). This centrality is even more visible when the bubble graph is viewed at 75% representation (see Figure 2).

From the position of the sales and legal dots on the graph (in Figure 1), it is clear that more specialized skills such as customer interaction and the theme of “firm” is expectedly higher than for say, engineering and accounting job vacancies. Similarly, the themes of process and accounts reporting is of higher criticality for accounting jobs; with industry and product knowledge more important to marketing recruiters than for HR and engineering recruiters. (Also compare Table 1 for confirmation of ranking of terms). It is interesting to note how important business skills, industry knowledge and experience are to technical jobs such as accounting, banking and retail (respectively 87%; 100% and 55% theme connectivity). Figure 2 clearly illustrates the importance of experience in reporting, communication, process and time.
Figure 1: Concept Map for all job advertisements in the full dataset of 221 job advertisements (30% enlargement)
Figure 2: Concept Map for all job advertisements in the full dataset of 221 job advertisements (75% enlargement)
management, team relationships with clients, customer
and sales and communication (theme connectivity of 79%).
Business and industry-related experience; as well as
people competencies (people, staff and client development, project
management, staff and services; text relevance of +/-75%)
are highlighted by the bubble map.

The dispersion of competencies abilities and attributes re-
quired by recruiters is somewhat surprising, considering that
customer and people-orientated jobs such as sales, market-
ing and retail would be expected to indicate a higher level
of importance to soft skills such as “team”, “support” and “re-
lationships”. These inter-personal skills are noticeably more
often mentioned in advertisements for retail, engineering an
accounting, than in the other job vacancies.

Table 1 illustrates the most frequent words (top 10) identi-
fied for each of the job categories. The first numbers column
in each job function (e.g. Marketing, Retail, Sales, HR, Law,
Engineering, Bank and Accounting) represents the frequen-
cy of the word over the total 20 advertisements for each job
category (excl. banking & finance that had only 7 ads in the
dataset.) The second column (starting with 100 for market-
ing, 93 for sales and 95 for engineering) indicate the ranking
of the concept.

<table>
<thead>
<tr>
<th>Marketing, Retail &amp; Sales</th>
<th>Technical</th>
<th>Banking &amp; Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marketing</strong></td>
<td><strong>Retail</strong></td>
<td><strong>Sales</strong></td>
</tr>
<tr>
<td>Technical Content</td>
<td>Marketing</td>
<td>28 36</td>
</tr>
<tr>
<td>Communications</td>
<td>Sales</td>
<td>39 59</td>
</tr>
<tr>
<td>Media</td>
<td>Store</td>
<td>18 26</td>
</tr>
<tr>
<td></td>
<td>20 48</td>
<td>20 48</td>
</tr>
<tr>
<td><strong>Business Skills</strong></td>
<td><strong>Manager</strong></td>
<td><strong>Manager</strong></td>
</tr>
<tr>
<td>Skills</td>
<td>44 53</td>
<td>44 53</td>
</tr>
<tr>
<td>Manager</td>
<td>42 50</td>
<td>42 50</td>
</tr>
<tr>
<td>Management</td>
<td>23 50</td>
<td>23 50</td>
</tr>
<tr>
<td><strong>Experience</strong></td>
<td><strong>Experience</strong></td>
<td><strong>Experience</strong></td>
</tr>
<tr>
<td>48 62</td>
<td>30 71</td>
<td>77 35</td>
</tr>
<tr>
<td><strong>Interpersonal Skills</strong></td>
<td><strong>People</strong></td>
<td><strong>Team</strong></td>
</tr>
<tr>
<td>Team</td>
<td>32 41</td>
<td>32 41</td>
</tr>
<tr>
<td>People</td>
<td>18 45</td>
<td>18 45</td>
</tr>
<tr>
<td><strong>Digital</strong></td>
<td><strong>Digital</strong></td>
<td><strong>Digital</strong></td>
</tr>
</tbody>
</table>

Note: Please note that pronouns, adjectives and other
non-competency related words that may have appeared in the
advertisements were removed. These includes words such as:
effective; through; your; the; vacancy; immediate.

Analysis of the ranked concept list indicates the most highly
ranked concepts by job type. For marketing jobs “mar-
ketng” knowledge and skills (100%) and for engineering
technical knowledge (100%) were the most highly ranked
concepts; whilst for retail, law, engineering and accounting
“team” (100%) ranked highest; for HR “recruitment” (100%);
and for banking vacancies “business skills” (100%) were
regarded as of highest importance for job applicants. An
unexpected finding is the lack of appeals for digital and oth-
er technology competencies. The only job advertisements
to indicate a need (ranked at 38%) for IT or digital skills are
the marketing job advertisements. In the gig economy we
expected a higher level of explicit, manifested expectation
of computer competencies (e.g., for MYOB, Xero, design
software, or other computer interfaces).

In order to investigate the relative importance of compe-
tencies and attributes in more depth, researchers agreed on
three categories of jobs for collective analysis: (i) Marketing,
Sales & Retail; (ii) HR, Law & Engineering; and (iii) Finance:
Banking & Accounting. 93.3% inter-rater agreement was
achieved when job adverts were categorized by coders.
Maps by Job Type and Discipline: Comparison between Marketing, Retail, Sales & Accounting

In pursuit of thoroughness and for comparative analyses, concept maps, count, frequency and connection tables were also created for each of the job functions and discipline areas studied (see Table 1). The separate analyses allowed for much greater detail about the conceptual nature and relationships within and between various job functions (Cretchley, Rooney & Gallois, 2010; Ho, Lo & Teo, 2013). The aim was to identify differences in perceived requisite knowledge, skills and attributes (KSAs) between the four different job tracks as listed here. Table 2 demonstrates the top five factors for each of the roles, and includes the percentage relevance.

It is interesting to note the difference in ranking of “team” competencies for roles in accounting (normally perceived a technical function) and marketing (normally a people-oriented function). Another interesting phenomenon is the relevance of experience to all the job vacancies. In figure 3, an additional analysis of the “experience” concept links and relevance to marketing vacancy advertisements is graphically demonstrated. The analysis and figure clearly demonstrate the importance of experience in marketing, communication skills, sales, business and industry, and services.

Critical Discussion & Future Research

Many recent studies attempt to address how the changing business needs affect competency and capability requirements, and thus the future employability of new graduates (Bennis & O’Toole, 2005; Boyatzis, 2011; Cannon & Burns, 1999; Cannon, 1995; Cottrell 2015; De Villiers, 2010/8; Kirstein & Kunz, 2016; Hager, Holland & Beckett, 2002; Low et al., 2016; Pfeffer & Fong, 2002; Timm, 2005). Our analyses focus on real, current job vacancy advertisements to determine how businesses anticipate their foreseeable future talent, capability and competency needs. Although this might directly link to businesses’ long-range forecasts of talent needs, the job advertisements may provide some indication of short-range talent needs, as businesses prepare for succession planning in line with their anticipated survival and growth plans.

Job Term and Permanency

In line with journalists reports, our sample indicates that approximately 15% of vacant jobs are advertised for part-time or contracted employees. It is encouraging to see more than 85% of current business vacancies are still for full-time employees. This finding somewhat contradicts reports by journalists and education advisors that temporary, flexible jobs are commonplace and companies tend toward hiring independent contractors and freelancers instead of full-time employees (Deloitte Consulting, 2018; FYA, 2018). The high percentage of part-time and contracted job vacancies might indicate a trend in that direction, but since this is not a comparative temporal study, we can neither confirm nor contradict reports on this trend.

In the modern workplace enabled by digital technology, it’s becoming increasingly common for people to work remotely or from home (Chignell; 2018; Lighthall, 2017). Online journalist Giang (2013) and Deloitte Consulting (2018) reports that employers cannot afford to hire full-time employees or need specialized skills for a short project or peak-time in the business cycle, so they hire part-time or temporary employees to take care of specific projects. People also tend to “change careers many times throughout their lives, so the gig economy is the reflection of this occurring on a large scale” (Investopedia, 2017, p.1). Research (FYA, 2018) indicate that employees will change jobs up to 43 times and careers up to 17 times over their lifespan. Employees often find that they need to move around or take more than one position in order to afford the lifestyle they want. The scope and span of our research did not include findings in this regard. So, future research studies to indicate the trend towards flexible work hours and/or work-from-home opportunities for business graduates will be valuable.

In addition, research into specialized skills or attributes to deal with the unique demands of flexible, specialized work-from-home opportunities and how to manage one’s career within this context will be useful for recruiters and career advisors. Further, research into the particular progression of skills that will allow for upward career trajectories in short-burst employment or matrix project-bases structures (particular to each discipline) is necessary. UBSs also need to consider how to prepare students to transition between different careers, ensure life-long learning as orientation and as skill. Further, UBS need to equip students with the necessary self-coaching and self-marketing skills to: (i) identify transferrable skills; and (ii) convince employers that their expertise is useful in entirely new jobs or careers. Further research studies make a valuable contribution to andragogy by considering what and how students can be futureproof and have futurefast transferrable life-work-competencies.
Table 2: Comparative Analysis of Vacancies in Marketing, Retail, Sales & Accounting Job Advertisements

<table>
<thead>
<tr>
<th>ACCOUNTING</th>
<th>Connected concepts within the context of the theme</th>
<th>Count</th>
<th>Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>team</td>
<td>Team, group; inter-group relationships; we work together; establish and build relationships; caring for people…at the core; mentor a team</td>
<td>86</td>
<td>100</td>
</tr>
<tr>
<td>business</td>
<td>Workflow; effective work; international; global; multi-tier firm; company culture; continuously improve (a large number of business terms not included here but in the job adverts are related to the employer, not the applicant/vacancy)</td>
<td>75</td>
<td>87</td>
</tr>
<tr>
<td>experience</td>
<td>Experience in reputable firm; worked in a similar role; CA mentor; BAS experience; Xero knowledge; MYOB; systems skills; reviewing work; workflow management; strong accounting background; SAP system experience; RECON and ADP Globalview; strong analytical background; experience in procurement/purchasing</td>
<td>74</td>
<td>86</td>
</tr>
<tr>
<td>skills</td>
<td>Financial reporting; excellent communication skills; customer service skills; work-approach skills; understanding FIF,s FBT, tax, continuing rules, dividends; exposure to mergers and acquisitions; systems skills; managing direct reports; strong verbal and written communication skills; analytical and reporting skills; financial reporting and reconciliations; CA; CPA; commercial acumen; effortlessly build strong relationships.</td>
<td>74</td>
<td>86</td>
</tr>
<tr>
<td>accounts</td>
<td>Eye for detail; developing accounts; good relationships with key accounts;</td>
<td>67</td>
<td>78</td>
</tr>
</tbody>
</table>

Various attributes sought in vacancy advertisements:
- detail-orientation; sense of humour; initiative;
- positive “can do” attitude; highly organised; confident; empathetic; change agent; work autonomously

<table>
<thead>
<tr>
<th>MARKETING</th>
<th></th>
<th>Count</th>
<th>Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>marketing</td>
<td>Marketing plans; marketing support; marketing promotional materials; market trends, forecasts, account analyses; new product development; new product information</td>
<td>78</td>
<td>100</td>
</tr>
<tr>
<td>experience</td>
<td>Communication briefings; effective networking; experience communicator; social media; media channels; wide range of marketing experiences incl. print, digital, data analytics; supporting sales staff; story-telling; experience in [industry].</td>
<td>48</td>
<td>62</td>
</tr>
<tr>
<td>skills</td>
<td>Project work; constant innovation; story-telling content; strong networking skills; excellent relationship management skills; action-orientation; product costings &amp; renewal; sales pricing; creative tools and thinking skills;</td>
<td>34</td>
<td>44</td>
</tr>
<tr>
<td>manager</td>
<td>Coordinating requirements with agency &amp; graphics department; Sales support; relaying customer requests; strategic thinker; manage paper work; tracking progress and performances; prepare budget and monthly accounts;</td>
<td>33</td>
<td>42</td>
</tr>
</tbody>
</table>
### Various attributes sought in vacancy advertisements:

**team**
- Work collaboratively to solve problems; team-player; work in various project teams; across special project teams; coordinating team-based projects; collaborative team environment; work together to achieve outcomes;  
- Experience in digital marketing; digital marketing expertise; enjoy social media and digital data analytics; SEO; diverse range of digital and social media; strong analytical background; skillset in digital, mobile and social marketing;  

**digital**

**Various attributes sought in vacancy advertisements:**

- Organised; confident; empathetic; change agent; curiosity; work autonomously; self-starter; stay focused; constantly innovating; creative; drive; energy; commitment; detailed fashion of dealing with others; creative thinker; social; supportive; lifelong learners  

**RETAIL**

<table>
<thead>
<tr>
<th>team</th>
<th>“join the team”; team-player; “commitment to the team”; work in a large team; providing team training</th>
</tr>
</thead>
<tbody>
<tr>
<td>customer</td>
<td>Dealing with a wide range of customers; enthusiasm for customer care; creative solutions to customer problems; customer service; serve customer needs</td>
</tr>
<tr>
<td>experience</td>
<td>Success in increasing market share; passionate, experienced retail star; proved track record of experience; experience in [...] industry; experienced in dealing with demanding customers; [industry] experience; assisting hobbyists and professionals; experience and credit control knowledge.</td>
</tr>
<tr>
<td>service</td>
<td>Regular contact with customers; excellent service to providers; friendly and customer-focussed manners; ensure displays are stocked and set up to co. specifications;</td>
</tr>
</tbody>
</table>

**Various attributes sought in vacancy advertisements:**

- Meticulousness; sense of humour; initiative; reliable; adaptable; positive “can do” attitude; highly organised; confident; out-going personality; enthusiastic; talented; passion for [industry]; passionate; time-management

**SALES**

<table>
<thead>
<tr>
<th>sales</th>
<th>Targeting new customers; sales (x210); presentation skills; Write and present business proposals; new business development and sales; outstanding networking skills; prepare and present reports; spend protracted periods of time on the road</th>
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</thead>
<tbody>
<tr>
<td>business</td>
<td>Customer-centric business; presentations; problem-solving; solutions; maintain high levels of customer satisfaction; analyse problems accurately and fast</td>
</tr>
<tr>
<td>team</td>
<td>Going the extra mile; supportive to team; ability to resolve issues; strong team player</td>
</tr>
<tr>
<td>experience</td>
<td>Data-base experience; customer-centric; sales professional; out of town travel; sale experience in [this] industry; at least x years’ experience in a B2B role; more than x year in [a particular] industry; experience in supervisory role;</td>
</tr>
<tr>
<td>skills</td>
<td>67</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>----</td>
</tr>
<tr>
<td>Organized; results-driven; selling technical products; B2B and B2C sales skills; creative solutions to clients’ problems; consultative selling; communication; preparing and submitting proposals; web-site and e-mail marketing; golf; account management; sales administration; proactive developing customer relationships; confident communicator; sustainable management; build rapport; health &amp; safety procedures; Driven; goal-focussed; fun and out-going; determination to succeed; confidence; tenacity; positive; dedicated; self-driven; self-managed; dedicated to self-growth; focused high-achiever;</td>
<td></td>
</tr>
</tbody>
</table>

**Various attributes sought in vacancy advertisements:**

- Passionate about eco-efficiency;
- well presented; can-do attitude;
- Work autonomously;
- attention to detail; meticulous;

**Technical & Soft Skills (Including “team” or collaboration abilities)**

Using NVivo (thematic analysis software available from QSR Software) and pivot tables, further analysis uncovered people specifications or competency requirements beyond the technical skills [such as qualifications, technical competencies (e.g., “CA qualified”; “experience of tax returns and legislation”; “good grasp of basic accounts”; “strong accounting and administrative skills”)]. Our analysis uncovered a range of soft skills, ranging from “be able to negotiate”, through “strong communication, data organization and problem solving skills”, to “the ability to collaborate and lead others”. We found that the soft skills requirements outweighed (in number of words, number of lines and proportion of the advertisement coverage (space) in ratio of 3.7 to 1.2, thus more than triple (3.1) the space and weight of or business, and (i.e., job specific task competencies and inter-personal/relational/communication skills). It is also noticeable that requirements for teamwork competencies are very highly ranked in all retail, marketing, sales and accounting job specifications.

In terms of general competencies for future jobs, most of which will be new and unforeseen, the FYA (2017) concludes that “[universities] need to ensure that young people not only acquire foundational and technical skills but that they are able to deploy those skills in an increasingly enterprising way – as active problem solvers and communicators of ideas, equipped with a more entrepreneurial mindset and appetite for ongoing learning. Young people today will need to develop their cognitive and emotional skills to a much higher level” (p.8). For this study, the most prolific skills are report writing; team work, creative problem solving and oral communication.

The job specifications in this study confirm that organizations realize the need to recruit entry level employees with a good level of competency in inter-personal and teamwork skills already developed, in preparation for further on-the-job development. “For many organizations, selecting employees on the criterion of emotional intelligence has become a standard procedure. Several studies have shown the fact that selecting employees based on this criterion clearly leads to better results compared to traditional methods” (Patrovici, 2014, p. 230). Our study confirms the importance of soft skills as reflected in job vacancies and predicted by various professional accountancy bodies (Botes, 2009). Employers recognize and demand high levels of communication and team interaction skills; even those career options with a high demand for technical (job-specific competencies) such as engineering, accounting and law recognize and reflect the soft skill demand.

In tomorrow’s workplace where change will be the only constant, graduates need to be ready to successfully negotiate changes at the speed of change (Willer, 2015) and contribute to society. Journalists that report on the “gig economy” and “fourth industrial revolution” (Investopedia, 2017, Manyika, 2017) and various scholars highlight the agility future businesspeople will need to anticipate, initiate and respond to world events (Kinsinger & Walch 2012; Mack et al., 2015). In the “gig economy”, businesses need every employee (and every team) to be effective and efficient, performing optimally), willing and able to deal with a range of never-encountered problems for which to find new, creative solutions.
Business & Management Skills

From close analyses, a large number of the business concepts relates to the advertisers’ own business. From the Leximancer analyses of business competencies expected from the graduate applicants, it is clear that business skills (also called “enterprise skills” by FYA, Deloitte Consulting) are in high demand across all job vacancies for business graduates. These skills include competencies in managing relationships, managing people/staff; industry and product knowledge; business processes; accounts; project management; and dealing with customers. Job advertisements demand “engineering skills”; “accounting skills” and “marketing skills” without further clarification. Future research using interviews and possibly some ethnographic research into daily activities and tasks should unpack these competencies to assist educators and trainers to nurture the transferrable skills. Additionally, competencies such as “coordinating workflow”; “supporting sales staff”; “improve business performance”; and “deliver annual plans” are some examples of specific skills demanded in the job advertisements. Several job advertisements promise development in this area: “increasing management responsibilities” and “exposure to new technical areas”; “exposure to a wide range of value-add projects” and “managing to factory budget with the executive team … will offer many opportunities”. Thus, most of the business competencies can be reclassified as technical skills (related to the task of the particular vacancy function), or inter-personal skills (related to communicating with internal and external customers of the business), or management skills (managing or supervising the performance and effectiveness of resources).

Experience

All business recruiters place experience high on the list of requisite KSAs. Further in-depth analyses indicate that the experience needs to be relevant and topical. The term ‘relevance’ indicates that the experience needs to be industry-related, or specific function (/role) related. We use the word “apposite” to indicate that the experience is aligned with both the task specifications of the vacancy and the inter-personal role specifications of the advertised job. Future employers demand prior experience of a uniquely defined period and mention “current” or “recent” as specifications related to timing. In addition, a number of advertisements referred to experience in using software, problem solving, dealing with customers and practiced in using data analysis tools.

Requisite Digital Competencies

Our analysis indicates surprisingly low frequency of requests for digital competencies, with the exception of the marketing job advertisements. In the “gig” economy and digital marketplace, it is not surprising that marketers are required to have digital competencies. It is rather surprising how lowly ranked (38%) and of low frequency (30 mentions) this requisite competency is, relative to management (42%; 33 mentions) and teams (41%; 32 mentions). Other job vacancies refer to “computer literacy”; “a passion for social media” and requests for particular software competencies, but fail to explicitly request digital literacy, fluency or competency. This lack of overt requests may be because technical competencies such as “reporting” for accounting students overtly include the current technology-enabled tools to do current accounting jobs (e.g., MYOB, Xero, SalaryPlus; MoneyWorks). In addition, recruiters may not include an applicant in the shortlist of candidates, if they do not have the requisite qualifications. Close links between academe and professional bodies align curricula with highly standardized content requirements, as specified by qualification authorities. In addition, the professional bodies circumscribe to academe what is required as KSA in the professional’s degrees, such as auditing, accounting and engineering.

Much has been written about the expansion of the role of technology in the future of enterprise and work. As early as 1996 Tapscott (p. 34) indicated that IT “will have a radical impact on every fabric of society”. In 2002 Alexander stressed the importance of technology-related competencies (Alexander 2002, p. 412) and in 2015, Suskind & Suskind report that “increasingly capable machines will take on many of the tasks that have been the historic preserve of the professions” (p.2). Whilst Liddy (2014) reports on at-risk careers, where more tasks that once required execution by human beings, are likely to be performed “more productively, cheaply, easily, quickly and to a higher standard by a range of [computerized] systems” (Suskind & Suskind, 2015, p.159). These human-machine interactions demand data literacy competencies. Moreover, Deloitte Consulting’s Berin Report (2018) elevates the importance of data literacy to “data fluency”, with 28% of employers reporting higher levels of data “fluency to aid evidence-based decisions (p. 9).

Conclusion

UBSs seem to fail to innovate and evolve fast enough to adapt to the revolution and radical paradigm shift real-world organizations are having to cope with and are
trying to find ways to negotiating through (Bennett, 2014; De Villiers 2010). The sluggish response of Business Schools to marketspace (online and real-world) changes leaves a tectonic crevice between the expectations of employers and employees and the offerings of these. Businesses will need talent with the right orientation and competencies to survive and thrive in a globalized, hypercompetitive marketplace. In turn, business graduates as future employers and employees will need the right skill set to prosper and stay futurefast in the disrupted, automated workplace. This is not just a future shift, job advertisements already show that this shift is well under way, with vacancies demanding more soft skills (especially team-based competencies), more flexibility, problem-solving and creative thinking competencies from entry-level employees.

Perhaps too much focus is placed on teaching technical competencies for jobs that might vanish as workplaces get radically innovated, where more focus might be necessary on how graduates are prepared to constantly respond to new data and information, to relearn skills to adapt to new technology; to hone inter-agent communication to deal with ever-smarter technology as AI and robotics take on some of the manual, repetitive, predictable tasks; and to re-invent themselves as investigators, innovators and creators with the agility and flexibility to sway with the winds of change. Thus, UBSs need to shoulder their responsibility to help develop the advanced levels of cognitive, emotional and digital competencies required to thrive in the future business workplace (See Figure 4 for an illustration of future competency sectors).

USBs’ course, curriculum and degree redesign should address all three sectors, of (i) business IQ (BiQ), (ii) social and emotional intelligence (EIQ), and (iii) digital/technological intelligence (TIQ) to prepare and developing human talent both as contributors to organizations, whilst understanding their roles as guardians of the planet (environmental) and the ethical, moral and human rights of all humans (amongst AI as agents of organizations). Each business degree should cover some of the basic human skills to thrive in a complex and ambiguous world

**Ideas for practice**

Experience is high on the agenda of future employers. Employers demand high levels of business (enterprise), inter-personal (team, emotional and communication) skills and the ability of employees to know and manage themselves. For these reasons, learning interventions should incorporate multiple real-world, complex, project-based learning experiences inside and beyond the classroom – exposing students to the complexity, ambiguity, volatility and uncertainly of a future in business. Learning experiences should incorporate activities that promote self-knowledge, the ability to self-coach and the fervour to monitor change. Future graduate will need the agility to adapt and the knowledge about how to continually develop new, requisite skills as new KSAs become necessary. Moreover, formal learning experiences should develop not only the role-specific technical skills, but also simultaneously develop transferrable enterprising, and career management skills.

Further, as AI and robotics join graduates as workforce in the workplace, employees will have to be fluent in data analysis, draw more on their numeracy, analytical, problem-solving and creative thinking abilities and communicate solutions to a wide audience of diverse co-workers. To communicate clearly and convincingly, various skills from creative and design industries such as storytelling, expression and artistry of ideas and the ability to empathize with the audience (as covered in design thinking theory) should be nurtured. Graduates
need to be critical thinkers and creative problem solvers, but even more importantly have strong communication skills to interact with people. The main differentiators likely to ensure humans’ value in the workplace are competencies related to applying convergent and divergent thinking not merely to generate the ideas, but to consider the longterm implications for the firm, the community the planet, even the galaxy. Human talent needs to be capable to use fast heuristics and slow, critical thinking as and when the context and the circumstances demand, without having to collect vast pools of data for analysis or extrapolation (machine learning) but rather relying on gut felt (based on varied experiences), creative thinking and problem-solving capabilities. Additionally, interactions with teams of humans and robotics in virtual reality and the workplace, will place high demands on moral and ethical fibre and flexibility of employees.

Young people will need to be prepared for a journey of lifelong learning, confident to work autonomously, and willing and able to adapt at an ever-increasing pace. Only at the risk of becoming obsolete as creators and distributors of knowledge and knowledge couriers, can UBSs delay their response to the appeals of their stakeholders. Employers’ and the business community’s demand that UBSs prepare graduates to play a significant, pivotal role in securing the well-being of all stakeholders (including Mother Nature), can simply not be ignored. Failure to respond effectively will allow the gap to become intractable and may leave UBSs without a place in the knowledge marketplace, putting their long-term viability at risk. The massification of education brought benefits to UBSs, but also the responsibility to deliver well-prepared future employees and leaders - capable of adding value to organizations and society, whilst constantly renewing themselves and their competencies in order to deal with increasingly more disruptive changes. If UBSs are unable to quickly develop more agile responses to demands, to respond to and anticipate evolution, they will face increasing trouble or become obsolete in a volatile, complex ever-changing society.

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Tyler, C. (2016). *The role of non-cognitive and cognitive skills in accounting for the intergenerational transmission of ‘top job’ status* (No. 16-03). Department of Quantitative Social Science-UCL Institute of Education, University College London.


Perspectives on the importance of creative thinking competencies to Australasian organisations

Philip Dennett and Rouxelle De Villiers

Abstract

The World Economic Forum’s (2018) report lists “creativity” as the third most important competency for the future of work. This study interviews three practitioners and three academics to investigate why creative thinking competencies are important to organizations in Australasia, and how organizations can go about nurturing these competencies. The paper takes the form of a question-and-answer report (Q&A) providing direct, verbatim quotes from the participants. Readers will be able to contrast the various views, and see how creative thinking competencies can be nurtured in traditionally non-creative roles in the organization. The paper contributes a conceptual map of creative competencies and provides a source of creativity tools and frameworks that are useful to practitioners, trainers and others keen to develop their creative minds.

Keywords:
Creativity; creative competencies; creativity tools; future of work; innovation; graduates; novelty; thinking skills.

Introduction

The World Economic Forum’s (2018) report lists “creativity” as the third most important competency for the future of work (skills needed for 2020) after complex problem solving and critical thinking. This is a significant jump from tenth place in 2015. The need for these three top skills is probably not a new insight for organizations that have to continuously navigate the volatile, uncertain, complex and ambiguous (VUCA, 1987) world of business. The workforce will need skills to deal with disruptive technologies, such as artificial intelligence and autonomous transport, advanced materials and biotechnology, in order to be employable and make a valuable contribution. This study aims to find out why creative thinking competency is important to the organization as a whole (not just for the traditional “creative” roles) and how organizations can go about nurturing these competencies.

Section I: Background, Method & Participants

This article was originally intended as a qualitative study of interviews to compare and contrast the views of academics to those of practitioners, as it relates to the need for and ability to develop creative competencies in employees other than those traditionally seen as “creatives” (also called talent in this study). We initially focused on the creative competencies of intrapreneurs – those who innovate within the confines of an organization (not self-employed or entrepreneurial). While transcribing the interviews, it became clear that the richness of the verbatim comments would be lost by paraphrasing or summarizing. In addition, a verbatim Q&A manuscript allows readers to see the full, rich perspectives on each topic – as directly seen by three academics and three practitioners. Therefore, the article is written in the form of a question-and-answer report, to give practitioners...
and scholars insight into the way the two camps currently view the role of creative competencies in organizations (in standard for-profit organizations, and in agencies and businesses whose main focus is on creative products, such as advertising agencies and ideators). This format shows the overlaps and correlations between the different viewpoints. Some categorization and interpretation is provided in graphics and in the conclusion of the paper.

The article has three sections. Section I provides a brief background and covers the research method and the selection of participants. Section II discusses the research method and provides the demographic details of the contributing respondents. Section III covers the ten questions answered (Q&A) by three academics (Academics A, B and C) with proven expertise and research in creativity, and three practitioners (Practitioners I, II, and III), involved in consultation, specializing in creative output. The entire content of this section is thus either unaltered, verbatim verbal comments by practitioners, or the written opinions of two academic authors, recorded unaltered to ensure authenticity and for comparison and contrast by the reader(s). The order of the answers is changed for each question, to avoid giving priority to a particular respondent or to create a perception of role order or ranking of answers. The article concludes with a short overview and summary of the viewpoints in the form of a conceptual map in Section IV.

Using the creative recording device of the conceptual map, the overview is captured in a graphic map to aid in visualization and recall. The author and editor hope that these graphical maps will provide readers with a practical tool to use when applying the valuable insights, whether shared with other learners or used in their own workspaces. In addition, we hope these conceptual maps will provide inspiration for future research.

**Section II: Research Method & Participants**

This study used telephonic interviews and structured surveys with six experts: three business school academics and three creative industry practitioners. In-depth telephonic interviews, following the robust guidelines developed by Farooq and De Villiers (2017) allowed the experts to share their views and personal insights with the researcher. The research sample (see Table 1) was selected based on (i) experience (more than ten years’ experience in various roles), and (ii) expertise in the creative industry (see Table 1). Exactly comparable criteria were used to find suitable academic respondents (i.e., more than ten years’ experience in creativity research and scholarship). Some respondents requested telephonic interviews, while two respondents chose to answer the pre-set questions in writing, using the self-administered survey method (Bryman, 2006; Kim et al. 2010). In all cases, the participants were given an exact copy of the full set of 10 questions; with no variation in sequence or wording of the questions. Both methods are effective, due to the relatively low sensitivity of the questions. The high complexity of the topic, the long interview time, 100% acceptance rate, high response quality, and relatively short collection time (Owens, 2002) for both methods ensured up-to-date, future-focused responses, making these methods ideal for this study.

**Table 1: Participants in the study**

<table>
<thead>
<tr>
<th>Demographic Details</th>
<th>Respondents</th>
</tr>
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<tbody>
<tr>
<td><strong>Age:</strong></td>
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</tr>
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<tr>
<td>37–46</td>
<td>3</td>
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<tr>
<td><strong>Gender:</strong></td>
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</tr>
<tr>
<td>female</td>
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<tr>
<td>11–15 years</td>
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<td>&gt;15 years</td>
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<tr>
<td><strong>Length of interviews:</strong></td>
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<tr>
<td>27 – 30 mins</td>
<td>1</td>
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<tr>
<td>30 – 40 mins</td>
<td>2</td>
</tr>
<tr>
<td>40 – 45 mins</td>
<td>1</td>
</tr>
<tr>
<td>Self-Managed</td>
<td>2</td>
</tr>
<tr>
<td><strong>Date of interviews:</strong></td>
<td></td>
</tr>
<tr>
<td>July 2019 – November 2019</td>
<td></td>
</tr>
</tbody>
</table>

Area(s) of expertise: Copy-writing; creative design; advertising; brand strategy; marketing and product management; brand consulting; business consulting; creativity research; nurturing creative competencies; executive development; CEO; creative director; research scholarship; employability; coaching, mentoring, skills development; vocational training.
Section III: Questions & Answers

Q1 Why is it important to nurture innovation and creative thinking competencies in organizations? Why is creativity important for ordinary employees - beyond those who might be seen as the traditionally “normal” creatives (e.g., designers, advertising agents, marketing and new product innovation staff)?

Academic A

First let me distinguish between creativity and innovation. Creativity is the connection of ideas that have not been connected before, in a way that produces a new combination (novel idea), that is also relevant or appropriate to the situation. Innovation is when that idea is taken and commercialised, made into an actual product, promotion or new organisational process. For organisations, creativity is crucial as it is the forerunner to new innovations that drive ongoing change and growth. These innovations can be new products or services; surprising attention-grabbing advertisements that grab the audience and compel them to try the organisation’s products or services; new processes, such as new business models (i.e. renting fashion clothing); or internal processes (i.e. accounting systems automation).

Creativity and innovation are therefore important complementary concepts that must be encouraged in organisations. However, there are a number of tensions that make creativity and innovation difficult to achieve in organisations, and even a tension between the requirements needed for creativity versus that for innovation. This relates to the type of creative idea itself (see Figure 1).

Figure 1: The Creativity Frontier (Adapted from Kilgour, 2007, p. 56)

Creative ideas are the result of combination processes. The more unusual the ideas that are combined, the more original the new idea, but often the harder it is for other people to see the appropriateness, or relevance, of that new idea. For example, the original Star Trek hand-held communication device; a very novel idea at the time, but given technological limits, seen as pure fantasy – a bizarre idea. Creative competencies in organisations are generally focused on encouraging people to express their more novel ideas; however, innovation processes in many organisations are about ensuring any idea is workable and if managers are risk averse, then they tend to support more incremental, little c ideas, not Big C radical changes. Big C ideas can change the world, but organisations need incremental changes (small c ideas), to keep on improving just to remain competitive. All types of creative ideas can provide value and can come from anywhere in the organisations, but some organisational roles are more likely to be involved in creative idea generation and development processes. These roles, such as designers, or advertising creatives, are likely to have developed expertise to support their creative thinking, but equally as importantly are likely to have job processes that allow creative and innovation to occur.

Academic B

It is impossible to predict the future of business, work and the disruptions that new technological advancements such as artificial intelligence (AI) will cause in the workplace. Which competencies and resources (engines, robots, tools, products) the human race will need to survive and prosper into the next centuries, is almost impossible to predict today. What we do know with a great deal of certainty is that change is a constant. Businesses will need to have agile, flexible, adaptive staff, processes and the orientation to monitor, control and respond to ever-escalating contextual complexity due to the volatile, ambiguous, complex and uncertain environment (VUCA).

Economists today (Drath & Horch, 2014) predict the fourth industrial revolution (or gig economy) where internet technologies are integrated into industrial processes, procedures and business communications – cyberphysical production systems (CPSs). This new working environment
and marketplace will demand new cognitive skills and people skills. In his studies on the future of work, Dr Jared Cooney Horvath (2018) reports on the set of “c-skills” (critical thinking, creativity, communication, and collaboration) will that will be vital to future-proof life skills and suggests these c-skills will act as major competitive differentiators in the “knowledge economy”.

Further, future businesspeople will seek and develop creative competencies beyond rigid disciplinary boundaries to extend to all levels and roles of staff – also both for employees and stakeholders up and down the supply chain. Creative competencies are not merely focused around individuals capable of thinking creatively, but those “also adept at leading creative and innovative endeavours” who will lead people to innovative commercially viable new products, services and business processes (Antes & Schuelke, 2011). Leaders must be able not only to think creatively for themselves, but also to inspire and facilitate the creative outputs and creative thinking in others – both pro-active creative innovations and re-active responses to marketplace changes and challenges.

**Practitioner I**

In my view this is not only important, it is imperative to firms’ survival. If one wants a competitive advantage in today’s very tough and mega-competitive consumer space, one had better know how to stay ahead of the competitors. There are really only two ways: better marketing (which includes better products, better promotions, better pricing, better placement, better partnerships, better experiences for staff and customers – all 8 Ps) and then obviously constant innovation. Finding new and surprising ways to meet the expectation of ever-more-sophisticated consumers. What I mean by sophisticated, is they have more options, more information, they are more intelligent and well-read on the solution they seek – they demand from you, the firm – to constantly think how you can better serve them. You need to outsmart, outperform, out “service” and out-value everyone. Anyone that can satisfy the consumers’ need with a range of solutions. For example, if Mary Smith needs a new iron, … she is well aware that she can get a steam iron, a hot press, have her dresses collected and dry-cleaned. She can even have a service come into her house, re-organize her wardrobe, do the linen and ensure that her clothing is fitted, mended and pressed. In fact, she can have a personal shopper and stylist look after her entire wardrobe on a daily or weekly basis. Just maybe she is ready for more than the hot iron her mother used every Monday morning. So, coming back to your question: Is creativity important? A resounding YES! And not just for marketers but for every single employee, to ensure that every process, procedure, product and service is as effective, efficient and valuable as it can possibly be.

**Practitioner II**

If you consider developments since the industrial revolution to today, where we moved from different types of the factory floor… to things like code and digital development of technology, creativity becomes really important for organizations. Innovation, funnily, is not something that is especially reserved for the experimenters and those working on the edge of those pioneering spaces, but all the way back to how to we get more efficient in terms of saving more time or manufacturing and getting things to market. As the business landscape is changing for organizations, it is something that is just inherent as we move from more traditional mechanical models to digital models. Software is basically eating the world; and within that innovation becomes a very focused catalyst. With all that said, creativity is part and parcel of innovation. Seeing a behaviour and finding a way to do that behaviour ... or achieve that behaviour differently. Implementing that is becoming the new norm. We are coming to a place now where the new norm (for lack of a better expression) is the new norm and is always changing. Creativity is a competency that everyone should have, given the globalization. It is something everyone has, but due to job roles and descriptions or what the organization stands for no longer stamping their things on a conveyor belt and getting them out to market – we now need to tap into our human capability for creativity and find ways to continuously improve and continuously innovate to be successful in markets these days.

**Practitioner III**

Yes I do. It’s important for everyone in the business. It’s often the more mundane areas of a business they are that way they are, because people think that is the way they should be done. But, there are always other ways of looking at things. In my business we are attacked left right and centre by lots of competitive elements; everyone will have to be on their game all of the time. A creative outlook is a good way to encourage in people that they have to think differently about other aspects of their lives as well. It’s important in both a personal capacity and as an organizational force in a business to be able to think creatively.
Academics and practitioners both identified the important distinction between creativity and innovation and that both are needed to effect real change. Typically organisations chase the world-changing Big C ideas but often ignore small c ideas that create the systemic incremental improvements that help maintain competitiveness. As practitioner II says, creativity is for every single employee, “to ensure every process, procedure, product and service is as effective, efficient and valuable as it can be.”

The Japanese philosophy of Kaizen (change for good) is a sound way to implement this idea of creativity for everybody, everywhere. Kaizen begins with frontline employees being empowered to think creatively about their work and make appropriate improvements. This is supported by creativity researcher Amabile (2017) who says that individual creativity is the source of more breakthroughs than expert creativity.

Q2 In what way can creative thinking skills and agility of mind help the non-creatives in a firm?

Academic C

It’s probably not fair to talk about “creatives” and “non-creatives” since all humans are creative. Even accountants (as traditionally non-creative, more rule-based technical function) display some form of creativity. Also, all humans should... [in] at least some area of our lives be recreating ourselves and exploring ourselves in some way. It does not necessarily have an outpouring into the exterior environment. That is something that the organization really needs to accept and nurture. So, our idea of career from birth to death, has to be about the constancy of change of what we do. If we have people who are just constant in being alive, then they should be training people in organizations in such a way that it affects their intrinsic desire to improve some aspects, purposefully train a new skill from an intrinsic point of view. A very transactional point of view. Now, [if] the individuals understand the creative process, then they evaluate things on different terms. They understand the process and the need, why that may have to be different and why things may have a need to change. Say to have a cultural change ... you don’t really have to do it all by attrition or redundancy, and bring new people in, or take longer and have a benefi-
solutions to old problems or even new problems for new solutions. Creative thinking at the core of daily tasks.

**Academic B**

It is well recognized that value creation as a competitive strategy, is important for both firms' survival and to thrive in a highly competitive marketplace (Ireland & Webb, 2007; Matusik & Hill, 1998; Porter, 1985). As far as the value creation in organizations is concerned, creative competencies should be regarded as key inputs, whereas creative products and services are ultimate organizational outputs. Developing frontline and sales professionals’ competencies will improve their ability to think on their feet, answer tough questions and think of alternative routes to success or to solutions for customers' problems. With a "creative" mindset they will constantly be on the look-out for ways to CREATE value for customers, CREATE a competitive advantage for their firms, CREATE distinctive competencies for themselves and differential benefits for the firm - possibly the industry. Combined with a sense of social responsibility and ethical trust-building professionalism, individuals will not only help the firm to thrive but will likely have future-proof abilities to ensure their own employability well after the fourth revolution.

Very often the sticky problems organizations deal with are not only complex, but have urgency to action –because "they resist formulaic approaches" they demand creative solutions. When individuals or teams are skilled in creative thinking, they are able to consider alternatives in the spot, offer third alternative solutions for consideration by the other party, and demonstrate a willingness and ability to customize solutions to clients. If put to a productive use, creativity can help to achieve significant changes to existing business models and meet the needs of customers in an uncertain and interdependent world.

**Academic A**

Creativity should be the heart of academia. Our aim as academics is to come up with break-through blue sky ideas. New concepts and theories that change the world. In a fast-paced world it is also crucial that we teach our students expertise in creative thinking and innovation processes. The speed of change means that it is more important than ever not to merely focus on teaching specialist knowledge and expertise but give our students the ability to think creatively for themselves. New technologies, machine learning, automation, artificial intelligence, and robotics are likely to mean there will be a fundamental change in the work landscape. The one area [in which] people are still superior to machines is the ability to connect unusual ideas - to think creatively. More importantly, the world, with all its current problems, needs creative solutions. Both academics and our students need to be at the forefront of developing these solutions.

**Practitioner I**

Dimensionality is gained. In my line of work, we work with clients with harder skills – often bound by certain rules or norms of that industry – they don’t really operate outside their perceived competencies or what their job description says. Those organizations are struggling the most in the new marketplace, since they seem to have to work along this linear continuum of process. And in today's market things just seems to change too fast. What used to be the norm – look at past performance to indicate or predict future performance as to what will work and what can be expected – has been shattered. It does not work any longer. So for those clients opening up to what creativity in their space looks like, and how to make things become more valuable to their organizations and their customers. And so I face a lot of people who are very timid to be able to reach beyond the confines of their job descriptions and try something new… but the reality is that organizations with those kinds of people are probably the most susceptible to crumbling the soonest. And if you look historically – even at the last couple of decades, and seeing what's gone on with disruption from things like the internet, technology, you can pinpoint industries like media for instance, music, movies and others that are creative in outputs, but the industry does not want to change in terms of models for making money, models for operating, and those are the industries that have suffered the most… Those are the industries that seem to keep standing by this model that you pay us for our IP or media. But that control is lost to them. You know the internet has made things so accessible to everyone... the control no longer belongs to them. But the internet allows people to step around those gates and paywalls, so right there and then you see this need for understanding their customers differently – which means putting yourself out there and seeing what customers actually want and then translating that into what value for business it becomes. And as a result, models need to change to be able to achieve that. So that creativity needs to be inherent not to all of those organizations in terms of hard skills could be finance or business or corporate strategy, but the reality is you can no longer rely on the things of the past to achieve results in the future. So within
all of those things, a bit of all of those softer skills, creativity is needed in varying degrees. It’s not that everyone is going to become an openly or overly creative person, but they need to know that the box that they were once working in, is now expanding a little bit and that there is now a need to be able to work across disciplines. So that they are not just a specialist in one area, but they need to navigate a very complex organization and bring together new combination of things in new ways so that the company can thrive.

**Practitioner III**

In our business [advertising agency] so much of what we do is about the creativity. About the ideas. It is for instance the other people that we are dealing with that need the oversight of what they are doing and the process of what they are going through can really help them through the best way they can deliver that effort. So instead of working on it separately, it allows for a greater sense of collaboration and also a greater sense of “we’re all in this together”. A group effort is part of the creative effort, and the more they are aware of what the others do to create the result, the better they are [able] to provide the sharpest recommendations and best ways to spend time, money and limited resources.

**Ideas for practice**

Two ideas stand out here: constancy and synthesis. The constancy of change is something that should be embraced. This idea needs to be built into the culture of an organisation through leadership vision and supported throughout the organisation. A key creative skill that promotes the agility of mind required to work with change is synthesis – the ability to synthesise information from a range of domains and disciplines. Such synthesis comes from teams made up of people from different domains and levels of expertise; and trained in ideation.

Constructs such as Brainstorming (Hurt, 1994; Osborn, 1963); DeBono’s thinking hats (1999); Design Thinking (Arnold, 1959) or 4E’s Socratic modelling (Dennett, 2019) are all approaches that could be considered in developing ideation skills.

**Q3** Is it a natural inclination/ talent… OR can firms develop creativity in employees?

**Academic B**

Talent is by its very definition, a natural inclination or born ability/attribute or skill and thus not specifically developed. So, talent can be honed, sharpened or deepened, but not trained (as it is excluded in the very definition). Firms therefore need to recruit, employ and nurture naturally talented creatives. In contrast to employing naturally talented staff, firms can develop decision, cognitive and emotional competencies in ordinary people. Several authors from a range of disciplines (Amabile, Kilgour, Scott ) agree that creative competencies can be trained using various tools, through the provision of purpose, structure, knowledge and access to resources, including creativity tools.

**Academic C**

Close to 20 years ago a friend’s daughter came into the room and said: “… I’m Paris and I’m fine.” And she said it with such passion and curiosity that and I just went WOW! … How do we get back to where we were when we were five, where everything is about curiosity and about learning – and it’s not taken at a personal level? If in our development and as we go through schooling, [teachers] seem to want to load [leaners] up with these laws, rules and artificial constructs. The viewpoint seems to be that that is what it means to be human. To see the world as it is, and responds to it as it is not how it could be. Can we look for a state where we learn and develop, rather than seeking the corporate constructs that will guide who or what we want to be or know? Often we create a knowledge system and then we spend a lot of effort in incremental improvements, often just tightening and tightening the measurements. Now in creativity, part of it is establishing what …we don’t have new measurements, they then have to start the process of refinement to improve them as we improve our technique. Can we get back to that state? Well, we have to step away from the incremenitals and walk the areas we are uncomfortable in. To do that takes a lot of courage. And that must come from an individual level. It cannot just be constantly surrounding people with positive chatter at all time. It has to be done as a ritual in itself, not for the process of walking through the ritual. On the one hand the content skill or conduct skills, where we can walk through the process and not actually produce anything that invigorates or inspires a culture to grow. We walk in the same direction. That intent is a visionary thing. A step beyond where our content is now.
Practitioner I

This is what I do in my business. So yes, absolutely. One word is practice. It’s not about talking about it, it’s not about theorizing about it, it IS about exposure and practice. Yes, mentoring can be part of it. But it CANNOT be getting people to read about it. A frame of mind that exposes them to different methods in a simple way but then to get around and practice those skills. If I get into an org and we do things a certain way one time they get excited, but they will immediately return to how they worked before that interventions. So, the organizations need to give permission to people to practice that regularly. You hear a lot about “failing fast” or the importance of “failure” but the caveat I want to bring to this is that the only value to what you learn from failure is you learning from it and re-applying, or not making the same mistake twice and moving forward. What value do you get from the experience? It is not something you can do just the one time. You need to actually have a series or a practice of doing that so that it becomes habit. It becomes engraved. And is supported and represented from within the organization.

Practitioner II

I think just about everyone is born with a certain level of creativity. Just ask children under 7 if they can draw or sing or dance. They will all say “yes”. No hesitation. Only later in life do we wish to qualify that yes answer, with something like: “depending on how you define it”. So, if we look at creativity as that distinctive ability to come up with novel ideas and alternative ways of looking at the world, then only for a lucky minority that type of creativity is a natural talent, for the rest – the not-so-lucky ones – the good news is that it can be developed. But, as [with] all cognitive development, thinking is hard work and many choose to follow the road more travelled, that is the road of standard, school-trained logical thinking. Actually, I would like to put a qualification on that statement. I actually think very few people are really born and “voila, they’re creative”. I believe that their circumstances were such that their brains developed the ability to make leaps… connect distant thoughts, find new ways to do old things. Probably by being exposed to very many different ways to do things. Their parents possibly exposed them to multiple ways of doing the same thing. Challenged them with tough thinking problems. Perhaps demanded solutions for problems by finding “cheaper” ways or by “using what you have, not what you think you need”. Perhaps they had an aunt, a niece, a friend, a teacher who challenged them to try multiple sports, extra-mural activities, seek the “unusual”, seek the unique. Find the weird, the wacky. To question things with a curious, even critical mind – not merely accept an answer because “the old man said so”, or “the teacher told me so” or “I read it in the paper, so it must be true”, but accept it because I considered it carefully. To answer your second questions, as to “What can a mentor do?” Well, the first and most important three things are to question, question, question,

Q _U_ E_ S_T_I_O_N! Do not GIVE answers, but demand answers from the trainee. Make the trainee find AN answer. ANY answer. MANY answers. Not ONE right answer. Many possible answers on a continuum from highly unsuitable, to fairly suitable, to utterly wacky, weird, novel and just plain “unexpected”. Ensure that trainees are well aware that contextual factors affect the “best answer”. Ensure that the trainee is aware that you as mentor might not have an answer. That there may not even be “a right answer”, just a range of likely possibilities.

Practitioner III

One cannot teach someone to be talented. They are or they aren’t. But everyone has the ability to work in a creative way. So you can provide the environment and the tools to allow people to do that. Obviously some people are going to be more competent than others in how they get there. As far as teams go, the difference in personality and skills is valuable to creative work. I am for example good at coming up with the start of an idea and the general framework for it, whereas other people in the team are really good at making the idea look amazing or fleshing it out. So, if everyone applies their specific creative skill or expertise to those ideas, then we end up with the whole thing being greater than the sum of the parts. That’s working well for us as an advertising agency in a good number of the projects we are working on. People will have different specialized competences and talents, and business leaders need to be able to allow them to use it to their best. Keep on encouraging. Do not shoot people down. There is no such a thing as a bad idea. Sometimes the idea is just not quite right for the job the idea must be doing.

Academic A

Creative thinking is a combination of nature and nurture. The best theory that discusses this is Mednick (1962). Mednick talks about a person’s associative hierarchy, which in simple terms means the extent to which a person is able to
connect unusual ideas. For example what associations can a person make between the concepts of a ‘string’ and a ‘cat’; what about ‘coffee mug’ and ‘cat’? Some people are more easily able to connect less commonly associated words than others. These people are generally better creative thinkers – they can make relevant connections between unusual ideas. However, we also know that we can improve a person’s ability to make connections between unusual ideas. We can essentially train the brain, or use techniques, that force us to make less usual connections. The more we practice this, like any exercise, the better we get at doing this.

**Ideas for practice**

Because people are often reticent about trying something new, a catalyst in the form of a creative mentor can provide the inspiration and support for an individual to step outside their comfort zones. Identify “creative champions” in your organisation who can mentor others in their circle to build individual creative competency.

At the same time it is important for management to tolerate failure (as there is a certain amount of risk with new ideas) but this must be coupled with learning from it and extracting value from the process.

**Q4** Is it possible to recognize an innovator or creative? Is it possible to identify a person more likely to be the ideator to employ in one’s business? What are the attributes/traits one can recognize in ideators/creatives?

**Academic C**

I support the Schumpeterian view of creativity and that is to break the mould of what we are currently working in on a constant basis. And that has an implication for firms of any kind. Once you have reached a particular level you can maintain that particular level because you can’t see beyond that to what’s coming; it involves the … scanning process, interpreting process and action processes. Once you know what the further elements of that boundary are, and what is further on from that boundary, you can move further on. But from an organizational perspective, you have to remember that creativity has both that exploratory role of pushing the boundaries, exploring what could be (not necessarily what has to be, but what could be) and then there is an institutional role in terms of creating the new origin point... for stepping off to the next level. And that will lead to the new anchor… what we will need for stepping off - So, if we keep ending at the same place, we never start again.

**Practitioner I**

At Disney World creatives are called imagineers – stressing the two key attributes of imagination and ‘inners’, indicating the technical knowledge to bring the idea to life and/or the expressive ability to artfully persuade and relate their ideas to others. Various terms are used to name (label if you wish) creative thinkers, ranging from just “creatives” to “ideators”, “innovators”, “intrapreneurs” and “entrepreneurs”. Others are merely called “artsy fartsy”, “wacky” or sometimes admiringly called “ideas people”. It does not matter what they are called, their peers recognize them for their ability to see the same thing others see, but think differently. To see the same thing others see and respond differently. To act unexpectedly, unusually or unpredictably. They are normally the person in the meeting or room who is willing to use De Bono’s yellow hat and find something enthralling, something positively challenging and something inspirational in even the most mundane or most sticky problem. These are people who see problems not as stumbling blocks, but as building blocks to climb up to the next level of thinking or doing. They love the challenge of pulling on several (mental) strings in their thinking bow to combine logical, rational thinking with out-of-the-box, divergent thinking. They can image the future, the novel, the unusual. They are often incurably curious and frequently question “why?”. Creative people are often playful and at play. They are often called unrealistic or idealists, not because they are unable or ignorant of the realities, but because they are willing to “ideal-ize” the future. They ask, “what if?” rather than “what is?” or ask “how can we?” instead of “why not?” But, most all, they are curious, even nosy, to a fault. It’s as if they simply cannot pursue their interests hard or long enough. And they normally have many. Interests I mean. Kind of obsessive about their “hobbies”.

**Practitioner III**

Yes. When we are employing those type of people. You can spot those who are really good at giving the extra X-factor. Like in design, one can spot those who are good at making look stuff really good… versus those who have a really strong framework and conceptual [approach] to the work they are doing. It is also in the way they fight for the job. It is their habit to elevate something with a good idea behind it. Attributes and habits to spot are inquisitiveness, being very observant and very open minded about the world. They are
good at listening to those around them and what is going on. People empathy skills. A really good understanding of the human condition (if you like) and human behaviour.

**Academic B**

A large number of studies indicated motivation and persistence (e.g., Csikszentmihalyi, 1996; Gardner, 1993; Kawowski, Lebuda, Wisniewska, & Gralewski, 2013; Rossman, 1964; Simonton, 2010) as necessary traits, supported by a basic level of intelligence, a high level of general intelligence which probably positively influences creativity. A number of research authors (O’Connor, Kilgour, Kaufman, 2012; Kaufman, Pumacchaua, & Holt, 2013; Silvia, Kaufman, & Pretz, 2009) stress a wide range of knowledge over various domains; combined with expertise in one or more domains relevant to the problem. Persistence is another feature which was revealed as a key trait of great creators in many retrospective studies.

Ideators are generally inspired and motivated by sticky problems, rather than being demotivated or even disheartened by them. Ideators often (but not always) get more joy from constant change, than from routine work or industrialized processes. Creative thinkers talk about the “hunger” to create, or to “yearn for” a change to create something. The creative process is like an urge; an itch that needs scratching. Almost a “must have” rather than a “need to” activity for someone hard-wired to be creative. Imaginative people normally “enthusiasm for seeking new experiences and sociability [that] increase the probability of creative experiences.

**Practitioner II**

I am not sure if you can recognize ideators instantly, but you can certainly predict creative orientation or creative inclination by looking at people’s behavioural traits and thinking habits. Creatives are normally people who are open-minded, somewhat risk-taking and considers many alternative viewpoints – in other words, are accepting of diversity. Creatives are normally keen to listen to various opinions, not necessarily because they want to change their viewpoint (or are keen to change their mind), but because they would like to see if there is another viewpoint or paradigm out there, they might have missed. What you called ideators are people who normally can just bubble up many answers to a question, more than the average person [they are] likely start their answer to your questions with “it depends”. They are perpetually ready to see alternative viewpoints, see the influence of various contextual impacts – like the economy, social trends, cultural norms and other influencers, on the worth of an idea. I think their attributes would be something like inquisitiveness (even curiosity), open-mindedness, love of people (and their views); problem solvers; querying minds (critical but not in a negative sense); playful. Yes, playfulness is important. Ideas persons should not take themselves too seriously.

**Academic A**

It is difficult to recognize an innovator until they have become one. This is because of the wide range of skills needed to be an innovator. Not only do you need to be good at creative thinking, i.e. having a flat associative hierarchy and able to connect unusual ideas, but you must also be driven to spend a lot of time to learn about those areas that you have connected in order to make that idea relevant or appropriate. From there you must then have good presentation skills and be persuasive, in order to get other people to see the value in the ideas as well as find support. You must possess leadership qualities and be internally highly motivated. Even if you possess all of these abilities you may still find that large existing incumbents either (i) put up too many barriers for your idea to progress or (ii) they emulate your idea using their superior existing recourses. So, while we may be able to test people for associative abilities, identifying innovators is a much harder process.

**Ideas for practice**

Our interviewees highlighted a number of traits based on their own experience/learning, however there is general agreement that an individual with high creative potential will be intrinsically motivated and resistant to negative extrinsic inputs. They will also have the ability to create new meanings from inputs and have a willingness to take risks.

However, it is important to make the distinction between an individual’s creative potential as described by Amabile (1998) and others and practiced creativity, which is the ability to exercise that potential. Therefore, in order to gain the most from creativity, in addition to individual characteristics, social and contextual elements are also important in the development of creative outcomes.

If we had to highlight one trait then that would be curiosity – curious people look beyond the obvious!
Q5 Are there any barriers to creating an innovation/intrapreneurial culture in an organization/firm?

Practitioner II

Oh so many. It’s almost easier to focus on what to do, than what NOT to do. Barriers are firstly and foremostly fixed ideas. Inflexible minds secondly. And probably most prolific and debilitating fixed, inflexible firm procedures/policies where talent can’t grow, and new thinking is squashed. A mindset of “if it ain’t broke, don’t touch it”. This firm culture will not lead to talented thinkers offering new ideas. I suppose the trick is to establish the very opposite of that. A firm where news ideas are welcomed, even sought after and rewarded. A culture where internal entrepreneurs – you called them intrapreneurs – are valued and made into heroes. Where others can see that the ideas are not just heard… but are in fact tried out and implemented. Where not only the boss’s ideas get piloted, but where everyone and anyone with suggestions on how to improve things, do better for the staff, the firm, the clients and even beyond the firm, to the local community and nature can benefit. The second of many barriers that should go, is overworking staff or relentless stress. Creativity does not prosper in stressed environments. Thirdly, the office environment needs to be filled with at least some sense of play. Not much creativity will grow in the local morgue (I think – smiling). Good lighting, access to tools such as APPs and software to assist bringing ideas to life and expressing those ideas so that others (beyond the ideator) can see the vision or the concept that the ideator has in his/her mind’s eye. It is important for the leadership to recognize that people think and create through very different thinking processes – often referred to as “my process” in agencies. There should be the mental and physical space (literally) to process ideas as and how they see fit. This means, once again… one size does not fit all!

Practitioner III

You need an environment where there are few political games, in-fighting, where creatives can work freely as creative people. It’s really key. Each and every team member has their part to play. One person can ruin it for everyone else. We often tie ourselves up in the mandatory things that clients require of us. It is important to remember that clients employ us for our creativity. So allow space to create. Allow time and space to ideate.

Academic A

There are many barriers to innovation in organisations. Firstly, the process of developing creative ideas themselves is very cognitively taxing and requires both a base level of expertise in an area and plenty of uninterrupted time to contemplate and develop new connections. In a highly connected, fast-paced world this type of work is becoming harder to do. Processes need to be set up that support the creative ideation process and creative personnel need to be insulated from too many evaluative pressures early in their creative ideation processes. Advertising agencies have realized this and separate out the creatives from those who manage their clients to ensure that those creatives have the opportunity to develop more Big C ideas.

Another big issue in terms of innovation is that while developing a great creative idea is difficult in its own right, that idea must then make it through a number of evaluative processes. Great creative ideas often get rejected as it is difficult for external people to see their value (Kilgour, Koslow & O’Connor, 2019). This can be very de-motivating for the idea generator. It is crucial therefore that an environment that allows the idea generator to receive constructive evaluation of their initial creative ideas [from] people who understand the difficulties in creative evaluation. These ideas can then be nurtured and once developed to a stage where other people are more likely to be able to see how they will actually be relevant, will work, then presented again to a more critical audience. Such organisational structures are not well understood in most organisations (O’Connor et al., 2018) and therefore we tend to see small C incremental ideas rather than Big C breakthrough ideas as the norm.

Practitioner I

Tons of barriers. The organization itself can be a barrier. Like I said earlier, there’s a lot of talk, a lot of use of buzz words, but when push comes to shove, the organizational leadership is not behind it and enabling that change and innovation, and empowering people to master that. Empowering people to get faster, do more with less – or whatever those goals may be, they’re sure to fail. And again, I see this quite often. I get propositioned quite often with “you know we are trying to have a class to understand our customers better or offer better value … how do we go about it”. Organisations are not freeing people up – they are not giving permission to those human resources up to be able to learn those methods and practice them regularly at work. Expose others within the organization to it, that is surely going to die in the library quickly. So [we] must give people the freedom and opportunities to then practice. Organizations
need to be open to change and not just talk about it and provide it lip service. But the changes are here to stay. WE are doing everything to support it. And we will provide you the resources and the tools and we’ll do our best to get out of the way (within reason). So, I think saying it and doing it become two different things.

**Academic B**

Despite a huge range of barriers, ranging from a culture of “crisis management” or “chasing the ambulance” to one where employees with new ideas are quashed, hearing “if it ain’t broke, don’t fix it”, many organizations are famous for the creative work environment they provide and maintain. Employees feel free to offer ideas and try out new out-of-the-norm ideas. These creative environments are characterized by challenges at work, trust between colleagues, openness to new ideas, collaborative teams and even the real workspace within which creative teams spend their time. Leaders provide a sense of organisational dynamism; the office culture is one with several degrees of freedom and acceptance of diversity in all aspects of business and work-life.

Having creative workspaces that incorporate some important characteristics: customizable spaces in layout and design to accommodate private and shared spaces; display areas where short- and long-term project plans can live for prolonged periods; multiple media to tangibilize ideas (virtual and real – IT, WIFI access, various software and interactive technologies; plus older technology such as paper, paints, glue, flipcharts, data projectors).

According to Levesque (n.d.) whose work focuses on creative leadership, there are three critical ingredients that make the foundation of a creative work environment: 1) support of creative leadership and innovation, 2) a personal knowledge base that feeds a leader’s creativity, and 3) job requirements and responsibilities that require creative solutions.

**Academic C**

Many. And the tallest one is busy-ness and the second tallest, stress and operating in constant crisis mode. Thinkers need time to incubate ideas, test and re-test and allow ideas to simmer away in the back of their minds, in order to get a ‘gut feel’ if they are likely to work, think of alternatives and do the litmus test of viability. Is this idea real? Does it satisfy a real need? Will real customers find the idea useful, credible, viable, practical and execute-able? Will real people invest real money to make it, buy it, own it, maintain it. What is the likelihood that other people will “see the vision” and be willing to invest in the vision?

**Ideas for practice**

A central theme here is “time”. Constant pressure to perform coupled with no time or space to ideate and inflexible systems and processes all contribute to a culture with low creative tolerance. To overcome this situation you first must be aware of all the dimensions at play and consciously manage them. For many organisations creativity is seen as “something we do” rather than something that is an inbuilt part of the culture.

Authors Gundry, Kickul, and Prather (1994) distinguish ten dimensions of the internal environment of organizations that influence the level of creativity. Table 2 classifies them into three main categories: A) employees’ ability to engage with creative tasks; (B) employees’ ability to challenge the status quo without risk to self or career; and (C) trust.

**Table 2: Corporate Conditions to support, stimulate and nurture creative thinking**

<table>
<thead>
<tr>
<th>Category &amp; Concepts</th>
<th>Corporate Conditions</th>
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<tbody>
<tr>
<td>A Engage in creative tasks</td>
<td>1 idea time: the amount of time employees uses to develop new ideas and new possibilities; debates: the degree to which employees feel free to debate the issues actively;</td>
</tr>
<tr>
<td>B Trust and openness</td>
<td>3 risk-taking: the degree to which employees feel free to make mistakes when trying out a new idea. freedom: the degree to which individuals are given latitude in defining and executing their own work;</td>
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Q6 As employers/trainers/mentors we might like to develop creative competencies in our trainees/staff/talent/mentees...How can we do that? How can someone train/coach or develop this agility of mind/creative thinking in a team?

Practitioner III

We need models to work in. Develop models and systems to an operationally sound level, then you can start thinking out of the square as to how you can be innovative and creative. You have to get the right thought process happening before you can jump out. Try to get the right message to the right audience. Thinking about what the customer insights are. Thinking about what it is about what we are advertising that makes it so special. What the proof-points are. What are the pivotal moments in the decision. How best to meet the need or the sore point in the communication. The idea needs to be novel, appropriate to the needs of the audience and then expressed well. The skill required to give it that extra zing. Come to grips with the idea. See what it can be or see its potential. Then see the other side. This is how a writer or designer work across a whole lot of media. Say from moving to still media, and then how all the elements can be pulled together form something that is merely a good idea, to something that is perfectly executed. Across everything. That requires a lot of drive and experience to make it happen. To get away from run of the mill, to something uniquely elevated.

There is a minimum level of knowledge or intellect needed to be creative. Experience is good, but in the end it comes down to the creative talent and working your way through things. But the main thing is the talent, the drive, and the inquisitiveness to work out different ways of executing an idea. Any knowledge of the client’s product range is necessary and useful. You have to do your research into the client’s offers, of course. In a creative firm you will get a lot of that knowledge from the processes and tools; such as the client brief and target response statements. Knowledge is somewhat important, but that creative thinking talent is first and foremost.

Academic B

There are many ways, but five I would like to highlight: Identify persona and use role-play to make the stakeholders become real; make the imagined problem and its solutions visible/tangible (visualization, language, symbols, visual narrative analysis, collage; metaphorical thinking); overcome mental set fixation and functional fixation. Regularly set S_T_R_E_T_C_H challenges that demand various answers and teach learners to accept failure; to try and try again! Fail fast, learn fast, fix fast!

The importance of play is to reduce issues' seriousness, rid
the mind of some of the tightness of controlled and measured performance expectations, reduce mental set fixation, and become less serious about deeply held beliefs, biases and prejudices (De Villiers, Hess, 2019) so that the mind can wander. Ideas flow using free exploration, by reducing barriers to express wacky, weird alternatives, and by nurturing experimentation in combining ideas from distant domains, all this defining “serious play”. Most importantly, serious play allows for various styles of interaction and communication that opens up a range of alternatives or thinking modes (varying from intuitive, emotional, rational, critical to intellectual and intuitive) and removes the restrictions caused by serious issues such as religion, politics, personal values and norms and cultural differences.

I have used the four stages of the CRIT framework (a series of active learning and creative processes that are likely to move the participant from shallow learning to deep, transferrable learning) to develop creative competencies. The stages are:

- Connect – exposure to the problem connected with the phenomenon,
- Reflect – incubation (unconscious deliberation) and conscious metacognitive processes to link the problem to prior knowledge,
- Ideate – using convergent and divergent thinking tools to move the team from looking in upon the problem, to actively look outwards toward generating alternatives, and
- Test – polishing, piloting or testing the new ideas.

In terms of team creativity, promoting plurality of perspectives, challenging critical questioning and devil’s advocate dissent (Woodside, De Villiers & Marshall, 2016; De Villiers & Hankin) can be of great value to a collaborative inquiry or co-creation process.

Academic A

It can definitely be developed. FRAMOTURE: Frameworks, Motivation, Structure. Provide any human is born with a level of creativity [and given] the motivation, some frameworks, models and tools and the structure (including resources and processes) and they will become more creative. They might not become Tim Burton or Walt Disney or Sir Peter Jackson, but they will improve their creative thinking competencies (sometimes dramatically).

Practitioner II

Just challenge them. Allow them to blossom. Talented people who are allowed to expand their horizons and are given the opportunities to impress you with their ideas… will. They will just surprise and delight you. In contrast, if you place a box or crate around people, you will stifle their creativity and dry up their creative juices. You will get what you ask for. No more. (Possibly no less?). I can with certainty from past experiences say that an open environment where people can take some risks, experiment, fail and try again - without risk to job and ego – this is a place where opportunities grow, and creativity prosper. Challenge people. They might surprise you… more importantly, they will surprise themselves, enjoy it, and give you even more of the good stuff! Make them study some known creatives. People they admire. Whether it’s PIXAR’s storytelling staff, Tim Burton’s latest movie, a designer for Prada, or the creatives in RuPaul’s DragRace, it does not matter. Allow the trainees to find creatives they admire (not all designers or art directors) and study these creatives’ processes and methods and see what the trainee can gain or learn for themselves.

Practitioner III

Some places I have worked at are the most cheap and up-tight places you will ever find. That is not the environment where people can play their natural games and work freely as creative people. So the environment is really, really key. Within that, each and every team member has their part to play. It’s amazing how one person can ruin it for everybody else. And the other part is just that we often tie ourselves up in the mandatory things that our clients require of us. We just need to forget about those mundane things from time to time, and focus on the unique, the unusual. The novel. It is also important to remember, in our environment, that it has changed so much that we tie ourselves up in endless executional things. We tie ourselves up in those executionals rather than go back to the principle... coming up with really good ideas.

Academic A

In addition to teaching associative abilities we can train people in understanding the steps in the creative thinking and innovation process (see Figure 2). From there we can look at the broader range of expertise needed to take a creative idea from idea to commercialisation. This includes a range of soft skills, persuasion and leadership expertise. We must also create an environment within our organisations/classrooms...
that encourages and rewards risk taking behaviours and failure – as long as that failure is learnt from.

Figure 2: The Innovation Process (Adapted from Kilgour, 2007, p. 86)

Ideas for practice

There are a number of models that can be used to help develop creative teams (some discussed here are role-play, CRIT framework, FRAMOTURE). However, no matter which model you use, you need to create an environment in which:

- each person is valued and has a role to play
- inquisitiveness is fostered
- ideas and people are challenged
- failure is tolerated.

Q7 How are creative competencies useful or necessary to (say) frontline staff (e.g. in a call centre), sales professionals and the customer service personnel of your firm?

Practitioner III

Appreciation of creative talent and creativity is really important. We have a terrible history in this country of not valuing creativity and creatives enough. It’s helpful for ALL staff in ANY firm to have creative competencies to find new solutions to new and old problems.

Practitioner II

Since creativity is about finding novel ideas that are useful solutions for a problem… it is crystal clear to me how these skills will help sales and frontline staff. These roles are constantly confronted with some unencountered problems and customers seeking unique solutions to their unique problems. Novelty alone is not enough for creative solutions. The solutions have to be useful, relevant and appropriate for the person preferring the problem. If not, the solution is just wacky. Weird. Even crazy. So, finding fairly cost-effective solutions to new and old problems is constantly expected from sales and customer service staff. Customers are not always right; in fact they are not even always logical or fair. They want solutions nobody has even ever heard of. They want their problems to be considered and resolved NOW, by the person on the spot. They want immediate attention and they want solid, personalized solutions. All this is exactly creative thinking. It is exactly the result of cognitive gear grinding that we expect. New solutions for old problems and new thinking to find new solutions for old and new problems.

Academic A

Ideally all staff in our organisations are able to make quick decisions that provide new innovative solutions, but this does not mean they always should. We have to be careful with some decision processes in our organisations, and at times creative ideas are not needed. For example, it is more important that a call centre staff member knows about all of the product and service information that a company has to offer, and what solutions they can provide to customers within the boundaries set for them by the organisation. That call centre staff member should be primarily focused on providing consistent responses and while they need to be able to think for themselves and may have some scope for innovative service solutions, that scope will usually have to be limited. This is because if they develop highly novel solutions for each individual customer it could be very costly and result in an inconsistent brand message.

Creativity therefore becomes a balance. In some cases, frontline staff need to be able to come up with new solutions to unique problems, but if an existing response has been developed to a problem based upon extensive experience, then that routine response will usually provide a better solution. Ideally therefore frontline staff are able to provide both creative and routine responses to customers depending upon the situation. However, this takes time, training and the development of a knowledge and expertise, which can be costly for organisations.

Academic C

Maybe there are processes and ways of working that need changing. Some customers will demand unique ways or alternative product offerings, even services, that frontline staff will have to come up with right there and then. There may be little room to run back for advice or guidance on each step. You find places when the organizations’ actions and reactions cause barriers. Maybe there are things in the past that need change. Certain processes that need to change, even though they don’t seem broken right now. They have a leadership role in passing on that knowledge that you might think seems commonplace as understanding, so that they can see how they contribute to a much bigger vision.
**Academic B**

This question links closely to Question 1, and therefore suffice it to say that frontline staff and employees who consult with clients or are in direct touch with stakeholders, have a very real influence on perceived service, quality, brand reputation and brand equity of the firm. Thus, these employees’ problem-solving and value-creation abilities have a real impact on the competitive advantage of the firm.

Creative thinking competencies are not the same as the so-called creativity defined by the general public. People generally think of creativity as design, painting, dancing, drama – generally creative arts. The definition of creativity I use is the set of competencies that produce ideas that are: novel, appropriate, expressive/persuasive/hooks/teases, viable. This produces the acronyms NAEV or PATENTly (practicable, appropriate, teasing, expressed well, novel, and timely).

**Ideas for practice**

As practitioner II said, creative solutions in the frontline context should be useful, relevant and appropriate for the situation. Creativity therefore is a balance of consistency (known situations) and novelty (not previously known situations). The trick is to train people to recognise the situation they are dealing with and give them the training and support to be creative when required. In future these two tasks will be separated with AI handling the known and creative, skilled people handling the unknown.

**Q8 Are there specific tools and procedures that will make an ordinary person more creative and more innovative?**

**Academic C**

The more you use creative thinking tools, the better you get at them. With practice you embed them. A lot of people don’t see their daily working space as having room for creativity. Often if you take a tool into an organization it doesn’t become embedded. These tools cannot become embedded as common practice tools if you constantly feel you are busy, and under stress and you cannot meet your particular targets. Then you don’t have the space to sit back and take a moment and breathe; see the bigger picture – think about the how and “why” you are doing your work. Tool-wise there is nothing that I particularly use myself. If anything, just the ability to ACTIVELY look for something about my day to see something that surprises me. Even if it’s not a good surprise. Because, the idea of WOW, of amazement and wonder, (if someone goes and act in a particular way, wonder what that was about, and look at how you can get into their position at that particular moment). Stay curious that way.

**Academic A**

As mentioned, there are a range of techniques that we can use to make all of us more creative. These include a range of forced associative techniques, such as De Bono’s (1968) thinking hats technique, or Gordon’s (1961) synectics, or Goldenberg, Matsurky and Solomon's (1999) advertising creative templates. All of these techniques allow us to re-frame questions and assist us in creative ideation processes. In addition, there are a large number of processes that organisations can set up to allow more creative ideas to flourish across each step in the innovation process. These processes relate to how to manage the evaluation and development of creative ideas.

**Practitioner III**

In our firm, we have two or three BRAIN molecules – these are tools that help us with ideas around brand development or brand changes we have to re-, re-engineer or develop for new markets. We developed these tools ourselves, to think through all the aspects of the marketing mix. The other thinking tool is a briefing template about: what the client needs, and more importantly they will have the audience insights, the single-minded propositions. Nothing here ever really gets done without those tools. They are the main ones. On the media side we have an audit process that ensures we are spending clients’ money on the right channels with the right media and the right message. That is, analysing the audience versus the media usage and so on. This is more like the structure around the creative process to scaffold the creative process. Good ideas are formed around these frameworks. Good ideas need a starting point. A pivot point. You cannot simply give someone a white sheet of paper and say “give me a good idea”. There needs to be some purpose or goal or intention for the idea. Always start with the Who? And the what for?

**Practitioner I**

Depending on the industry they are in, there are different tools. The clients I work with [there are] two general areas: agile product development methods (so, agile methodolo-
gies and frameworks); these are principles about constantly optimizing and constantly evolving something so that it is performing at its peak and beyond consistently. I tend to merge that with customer-centric principles. So, understanding the needs of the end-user. Whether that is employees in the organization, whether that is actual customers or just humans in this world. Understanding what those needs are – what those annoyers or pain-points are. And then marrying that with a rapid thinking set of tools that takes those insights and new ideas and tests them with customers. Then usher those things quickly to market. These tools are actually very freely available in open source. Using things like Lean Customer sort of tools and agile methods – can be taken up through classes. Most major organizations within NZ tend to have some sort of agile practitioner – going through their own agile transformations – although they don’t hit the mark all of the time, they might do so 90% of the time. This sort of thing is going to become more the norm than the exception in terms of understanding how your modern products come to market and stay in market and become better over time.

Practitioner II

I am not sure there is an instant “cure”, and “et voila” some stagnant thinker is suddenly creative… if that’s what you are looking for! But there are certainly creative thinking tools that will help generate ideas to come off with ideas a particular problem. But creativity is really a three-stage process. From identifying the problem, issue or dilemma (or getting a creative brief), to considering or generating a myriad of ideas and then finally qualifying the ideas against a set of criteria to determine if they are worthy of time and resource investments. There are tools for each of these stages that will certainly help. We use these tools in my firm and when we consult with clients. So, I am not keen to give you my golden goose, but I will give you a few of the eggs I often share with clients. When accepting a brief, it is important to frame the problem with the context and with the stakeholders in mind. Who are the beneficiaries for the solution? Why are they interested in the problem? How will the solution make their lives (business or other aspects) better? Then the second thing to consider when defining the problem… is to know who decides if the solution is “worthy” and consider what they are looking for. For the ideation stage, we use a whole range of tools, including the very standard brainstorming methods, and the “persona” creation you will find in Design Thinking. So here the idea is to create a person, with a name, that is most likely to have the problem and will benefit from the solution. Who is she? Where does she live? What does she do? What is important to her? How does she behave? What are her habits? – All of this as it relates to her life and values re the original problem/brief. Lastly, after generating a whole host of ideas (Never just one. Never!), I advise my clients to “sleep on it”. Allow the ideas to incubate. A day or two later we use “red hat thinking”. Gut-feel responses to the solutions. Which of them “feel” right? Which don’t? Then we carefully consider which aspects of the ideas are “good” and “usable”, and what about the ideas are “bad”/”scary”/”too expensive”/”no good”, we can move forward with the one or ones we wish to pilot test with the client or amongst members of the intended target audience.

Q9 How do you keep your own creativity alive or develop your agility of mind on a continuous basis?

Academic C

I am fascinated by some of the great artists and Geoff Beck … has been playing guitar since the 1950s. One of the greatest guitarists and still loves playing his guitar and finds something new about his art every day. He still looks for something that inspires him. That is something to aspire to. For myself, I have to keep looking for something that is fresh. If I cannot find that, I have to take a step in a different direction to see if I can find something that interests me. And if it’s hard … Why does it interest me? Should it interest me? I need to work on finding curiosity in everyday life. Ask a whole lot of questions to create interest and awe. But probably to very best technique… turn the television off! Try using the other senses.

Academic A

Eat, drink, pray. No seriously, you need to feed your brain. Which means drink water (the brain is about 75% water), eat healthy so that you can sustain your energy – thinking is most often hard work (just think about this saying “stretch your mind”, and “hard thinking is required” or “mental agility” – it’s all about exercise and brain work). I know a guy who always says: “it’s time for some brain food” when he needs a break and hopes to start afresh on a particularly sticky problem. And then exercise. Literally so that you can start breathing faster, deeper AND so that you can allow your sub-conscious mind to incubate the already-there ideas. Read. Listen, read, listen. Read some more. Expand your domain knowledge. Expand your horizons. Know more so that you can find unusual links between unusual domains. After all, creatives are those people who see the
same things as other people see, but think differently. They see new connections where no-one else saw any connections, or merely saw the “normal”, usual and commonplace connections. Read up on the work of other creatives. Steal selectively. Take ideas from the movies, the arts, nature and apply those ideas to the sticky, troublesome problem at hand.

Practitioner III

Love! I simply what I’m doing and I am always driven by our mission in life which is to serve clients with creative solutions. When I stop feeling that love, it would be time for me to quit. I remain a student of my industry. I read up on the latest thinking in how creative excellence is unfolding. I love looking at the new, the weird, and the wonderful stuff that is going up in the world. I love having discussions in the office about trends. You know, there is so much you can get by just going along and seeing what is going on. There are also people in the industry in the world whose opinion I really respect, so I kind of follow them and like to keep up with their pearls of wisdom. For example Seth Godwin and strategic planner, Peter Seals (UK).

Practitioner II

PRACTICE! I tend to live and die by the methods I talked about. You know, if I look back at it from a distance, what these methods enable you to do is cut through the red tape and crap. Like “I think without really knowing what is going on with my customers.” In some organizations it’s always the highest paid person’s opinion that sort of dictates the direction. But those sorts of opinions have no grounding in statistics or facts, or historical or principle basis for that stuff. So, a lot of these methods deal with that rather quickly. Differentiating between opinions, assumptions and evidence-based facts. Replace those things with hypotheses. And being more of... a scientist upfront and the artist on the back. So being able to use the hypotheses to test and validate and then use them to find the solution. Too often the solution is preferred or offered upfront and that is just taken as gospel for the word from within and people spend a lot of time or effort to get that to market, without any ability to know if they succeeded in the market. A lot of the times those things fail. And they fail really horribly. And a lot of money is spent, a lot of people are burned out and all they really needed to do was to be able to validate it really quickly so that they had that confidence to be able to get it to market. Often what you find is energy level raise and being passionate about getting something to market that is meaningful and will actually do the job that they have set out to do. You find too much in traditional methods is simply opinion or conjecture. Is that just your opinion? If so, we need to test it. We need to find out if that is really what your customers want. If so, we can pilot it, but if not, if it is just an opinion that falls on its face.

Practitioner I

Someone said: “I think, therefore I am.” I think the best way to learn creative thinking, is to think. Make time to actually, really think. Stretch your brain. Grow the little grey cells (I think Agatha Christie’s Poirot said that). Some call it meditation. I personally just think one has to get out of crisis, busyness and get to sit and quietly think. Contemplate. Rethink. Reflect. The habit of reflection is one that creatives practice a lot. Often ask: Why are things as they are? How could they be? What would happen if...? What will change if...? How will humanity respond, if we....? I also like to force myself to learn something new fairly regularly. To be able to link distant domains and to partner unlikely ideas, one has to know a number of domains reasonably well, ideally up to expert level. Also, to learn something new flexes the brain muscles, and expands one’s comfort zone. The more pictures the mind can conjure up, the more one can imagine new things. Another way I stretch my thinking is to expose myself and my family to new experiences and new places. We all love travelling, so we try to plan going to unknown, foreign, new places as often as we can. Also, we play memory games. A lot! When we travel, as we wait or even at the dinner table. Expanding one’s brainpower is not hard, but like toning one’s muscles, it takes regular exercise.

Academic B

Brain plasticity theory (BPT) provides the answer to question 9 in that BPT indicates that people can learn new competencies through repetition, experience and various enacted experiences. To allow trainees to develop a high level of (i) openness to new ideas, (ii) experiences and (iii) tangibilized, enacted experiences, one should incorporate serious play or sensory play into one’s everyday life. I strongly suggest that ideators, trying to improve their agility of mind, practice every day. For example, use a site like Luminiso. In addition, learners need to “drop some tools”, in the words of Karl Weick. In other words, learn when not to use some of the limitations and restrictions placed on their thinking by the theories, frameworks and models they have learned. When you add new knowledge and ideas to your brain you create new neural connections. Our brains are the original web.
Further, educators and neurologists highlight the importance of intrinsic motivation, collaboratively determined objectives, personal satisfaction and performance-based measures to learn new cognitive skills and develop capabilities. But, many studies place emphasis on external factors such as workplace culture and the environment within which creativity is required.

Q10 Do you have any favourite creative thinking tools/aids you use? (How does it work?)

**Academic A**

I particularly enjoy using (and it seems the students do too) Synetics and Goldenberg’s templates and find them very effective in promoting divergent thinking. I like to find themes from movies and shows; in other words, stories. Fiction like Alice in Wonderland, Shrek and perhaps more recently Deadpool. Great works that are both inspired, inspirational and fun.

**Academic B**

Published studies and scholarly literature on creative thinking (and innovation) present a large variety of divergent and convergent thinking tools (Kilgour, Amabile, De Bono, ...). They range from the ever popular brainstorming to De Bono’s thinking hats, to somewhat more recent or lesser known ones such as TIPS, Agile minds, metaphorical thinking and design thinking tools. In the popular literature, hundreds of tools, models, frameworks, computer software-based tools and Android Apps can be used to stimulate creative thinking (e.g. EDUCBA; 75Tools; IdeaSandbox; Forbes’ 6 Tools; YouTube Videos on creative thinking tools).

**Practitioner III**

Nothing here ever really gets done without the thinking and planning tools or brain molecules mentioned earlier. They are the main tools. Also, learning from one another and learning from the great creatives of our time. Various talented people from various industries and genres: music, art, film, landscaping, architecture, programmers, gaming and play, to name but a few. Obviously one cannot ignore the gems of light and play offered by imagination geniuses from the past like Ogilvy and Disney. Or authors like C.S. Lewis, the brothers Grimm, Lewis Carroll, and Dr Seus. In the creative domains storytelling, using metaphors and ideomatic expressions are great tools to inspire alternative thinking patterns.

**Academic C**

Find new ways to explore and entertain yourself and start using your other senses. Peter Sing’s fifth discipline books have a stack of tools for short-term interventions or for personal use. Anything that expands your brain... Go back and learn some maths or learn to sing... just to get other parts of the brain in operation. De Bono has his thinking hats for different ways of thinking and lateral thinking. Then there’s the tool called “AND”. It’s essentially a type of brainstorming. Remove the “but” word from think-tank’s vocabulary and replace it with “and”. This continues the story and expands it, rather than stop to judge or stop to perhaps prematurely exit the thinking process. Allow thinkers to say: “and you can do this, and you can do that”. As opposed to “we can do this, BUT we cannot do that”. Within an hour you can peak out of ideas. It’s time to walk away and let things incubate. Allow your mind to grapple with the problem whilst you do other things. Later, keep combining thoughts and ideas. Another tool is “Letter jumping”; pathways in your brain to jump from one path to the other. Use the alphabet to identify at least 26 ideas that spring to mind in association with the issue or problem. Use associative techniques...If one thinking procedure has not worked, let’s try another procedure. Jump from one path to another – change your seat; change a different frame to use a primer of some sort to change the domain or discipline you think in.

Walk on the beach. Have a shower. Go to bed. De-focus your attention. Create a space where you can turn off all your ‘awarenesses’. Create a lot of cognitive space, so that the mind can wander. So that it is not so controlled. Let the mind wonder and wander. Essentially your brain is trying to sort through a whole variety of things and it has to snap back and forward in trying to create new pathways. Allow your subconscious mind to carry on trying to solve some issues. Set your mind to a problem and go to bed. Anything that you can do to de-clutter your mind. Give your brain space to wander between domains and do not cram your brain with inessentials.

Amabile studies time logs – [considering times] when creatives are trying to find solutions under time pressure. Also, a look into lunar missions, solving crises problems and the need to find a solution not a creative solution – just AN APPROPRIATE solution. Time pressure causes originality to nose dive and appropriateness or suitability of the solution takes over. You go into a different focus state. Your arousal is simply too high at the time to really allow for vastly novel
or creative, divergent ideas. Not a range of diverse alternatives, but ONE clearly appropriate solution.

In martial arts or with hard military technical thinking, you are taught to breathe well and have a lot of special awareness of what’s around you. That enables you to either finely direct your focus to the problem you are facing OR you can let that space exist. In contrast, anything that raises the heart rate and ignites the chemical processes around arousal is not beneficial to clear or divergent thinking. If you are constantly in a state of agitation or arousal, then even the most transactional work will not leave you feeling in any way creative. It won’t even allow you to recognize ideas by others that could have been amazing.

**Practitioner II**

I like using random words or random visuals. One way to get to random pictures is to simply think of the first word that comes to mind after hearing the brief or problem. Find that new word and type it into Google Images. Pick a predetermined picture. (Say row three, picture two). I then force myself to make a link between the original briefing or problem and the new picture. This will be the start of a chain of new ideas or concepts. Another way is to refer to a story well-known to me. For example: what would Alice in Wonderland make of the problem? Or the Mad Hatter? Or how would the wolf in Little Red Riding Hood react? What would the wolf suggest as solution? A trick I have learnt from my previous boss is to ask “WHY?” until the answer leads me to a solution. So it goes like this: “There are too many people who leave their dirty cups in the sink?” Why? Because the dishwasher is full of either dirty or clean cups. Why? Because no-one sees the need to unpack it. Why? Because there are still clean cups when they need one. Why? Because we have too many cups for the number or staff. SO… the solution to people not appointing a cleaning up or shouting at staff to clean up after themselves. The solution is to HAVE FEWER CUPS! And, Hey presto. The solution is quite different from the first one that might be: “Send out a memo to tell people to clean up after themselves”.

**Practitioner I**

Life. Study life in all its amazing complexity and all its ambiguity and intricacies. You will be amazed, and you will never be out of a source of stimulation and inspiration. Find your stimuli in nature and the amazing life forms that crawl, swim, fly, dig and walk on earth. The colours, the shapes, forms and ways to come about, get about and create about will never cease to amaze me. What a brilliant source of design ideas! We simply cannot outdo Mother Nature. Keep feeding your mind with new idea, new domains to connect, new ways of thinking about old stuff. Creativity is after all the ability to see the same thing as everyone else, and think differently about it.

**SECTION IV: The Conclusion**

Limitations of this Study

One can expect a certain level of bias from the selected participants, due to their particular interest in, work with and research into creativity. By pointing out this likely “selection bias” we acknowledge the limitation, and ask readers to focus on the contribution and usefulness of points raised by the two schools of thinkers (academic versus practitioners), rather than opinions not represented here. We also invite further research studies to interview a wider range of stakeholders; for example, government officials, policymakers, educators at various levels of pedagogy and andragogy, workplaces from both traditional more technical spectrums of work (e.g. accounting, legal practices, health/medical) and the traditionally more creative spectrum of work (e.g. architecture, advertising, media), and follow all seven steps of scientific interviews (including analysis using a variety of tools not used in this study).

There is a need for some tolerance of – or even active pursuit of – different viewpoints by the interviewees, even if the views are in conflict to the reader’s own. Due to the nature of creative work, where practitioners develop, nurture and hone “open minds” and a willingness to see alternative viewpoints from various vantage points, one can expect a range of views. From academics one hopes to see scientific minds, willing to consider the marketplace stimuli and input through the lens of future graduates, future employers and the global marketplace, considering which competencies are required from graduates – even if slightly rose-tinted. Thus, this study was based on a willingness to consider other interpretations of current realities in the workplace and anticipated new realities of future workplaces. The aim was to offer a wide range of insights useful to readers. We hoped to add some new insights, new ideas and some new ways of looking at old knowledge.
Ideas for practice

It is clear from the participants’ views that different perspectives on the role of creativity in the workplace exist, but that both academics and practitioners agree on the importance of creative thinking skills in the future of work. Further, there seems to be general agreement that the future will demand creative competencies from human staff; from the front-line staff to the leaders and CEOs, to complement the technical and logical abilities of AI and computer software (see Figure 4).

There is also general agreement that these competencies can be developed, both in people who are naturally talented and in those who may regard themselves as more rational, logical or skilled in hard, technical skills. Structure, motivational drivers and various tools can be used to achieve the requisite improvements and deliver on the growing need for creative competencies (see the concept map in Figure 5), summarized by the acronym KNOMOTURE (KNOWledge, MOtivation, Tools and StructURE).

Figure 4: Concept Map of “why” creative competencies are important to businesses and “who” should nurture creative competencies
Figure 5: Concept Map of “How” creative competencies can be nurtured

**Structure**
- Motivation/Purpose
  - Purpose & role in value-add is clear
  - Challenge/breach
  - Get buy-in into purpose
- Tools/Process/Procedures as Structure
  - Fast & Slow Thinking
  - Sense-making Tools
  - Heuristics & fast thinking skills
  - Slow, deliberate thinking skills
- Tools & Knowledge
  - Parse agile, curious minds
  - Nurture diversity, empathy & EQ
  - Expressive & persuasive abilities
  - Specialists with expert, deep knowledge in a range of disciplines
  - Teamwork, group collaboration with a common set of tools, well understood and honed by team members
- Remove Barriers
  - Constant renewal process of self & continuous learning
  - Purpose & role in value-add is clear
  - Change/transition
  - Get buy-in into purpose
- Provide Resources
  - Uniform & drop bad habits
  - Willingness to fail fast & slow
- Culture of innovation
  - Constant renewal process of self & continuous learning
  - Purpose & role in value-add is clear
  - Challenge/transition
  - Get buy-in into purpose
- Process design, internal systems improvement
- Seek & reward valuable ideas; tell stories to represent the culture of innovation
- Orientation, systems & procedures to constantly seek improvement, new ideas

**How**
Nurturing creative competencies

- Develop a risk appetite/Reduce risk aversion
- Creativity - constant crisis control, create cognitive space, uninterrupted time & incubation periods
- Constructive evaluative structures

**Motivation/Purpose**
- Purpose & role in value-add is clear
- Challenge/transition
- Get buy-in into purpose

**Tools & Knowledge**
- Parse agile, curious minds
- Nurture diversity, empathy & EQ
- Expressive & persuasive abilities
- Specialists with expert, deep knowledge in a range of disciplines
- Teamwork, group collaboration with a common set of tools, well understood and honed by team members

**Remove Barriers**
- Constant renewal process of self & continuous learning
- Purpose & role in value-add is clear
- Change/transition
- Get buy-in into purpose

**Provide Resources**
- Uniform & drop bad habits
- Willingness to fail fast & slow

**Culture of innovation**
- Constant renewal process of self & continuous learning
- Purpose & role in value-add is clear
- Change/transition
- Get buy-in into purpose

**Process design, internal systems improvement**

**Seek & reward valuable ideas; tell stories to represent the culture of innovation**

**Orientation, systems & procedures to constantly seek improvement, new ideas**

**Divergence techniques:**
- De Bono’s Hats
- Brainstorming
- Osborne Brain-writing
- MindMaps - Tony Buzan
- SCAMPER - Bob Eberle
- Goldemberg's templates
- Random word & picture techniques

**Convergence techniques:**
- PMI - De Bono
- Why? Why? Why?
- Feasibility: Clusters
- Evaluative techniques: CUPID, POINT & KITs

**Associative techniques:**
- Action/Object combinations
- Metaphorical thinking
- Ishikawa’s Fishbone Causal Diagram
- Synetic Thinking

*Dive and pilot a range of tools that are best suited to the problems and processes in your industry*
References (and further reading)


Science is deeply imaginative: why is this treated as a secret?

Tom McLeish

My latest book, The Poetry and Music of Science (2019), starts with my experiences of visiting schools and working with sixth-form pupils in general-studies classes. These students, aged 17-18, would tell me that they just didn’t see in science any room for their own imagination or creativity. Not just on one occasion but repeatedly I heard this from young people bright enough to have succeeded at any subject to which they set their minds.

Yet it doesn’t take an Albert Einstein to observe that, without the essential first step, without a creative reimagining of nature, a conceiving of hypotheses for what might be going on behind the perceived surface of phenomena, there can be no science at all. Einstein did of course have something to say on the matter. As he told an interviewer in 1929: “I am enough of an artist to draw freely upon my imagination. Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world.” Every scientist knows this, but for two centuries they have fallen mute about it, preferring instead a safer narrative about the ‘empirical method’ or ‘the logic of scientific discovery’. Science education favours the presentation of results, and a focus on knowledge, rather than the human stories of wonder, imagination, failed ideas and those glorious and uninvited moments of illumination that thread through the lives of all who actually do science. Our media mouths the same message – I will never forget the BBC documentary on computer science in which the presenter assured viewers, face to camera, that there is no room for imagination in science. No wonder my young colleagues had become disillusioned.

If scientists are somewhat shy about their experiences of imagination, then the artists, writers and composers I spoke to needed the same patience (and similarly the occasion-al drink) to draw them out about their repeated need to experiment. Scraping the paint from the canvas, redrafting the novel for the 10th time, rescoring the thematic musical material is – as every artist knows – the consequence of the material constraints that creativity meets unanticipated. The artist, too, makes hypotheses about how her material, words or sounds will achieve the goal in mind, however indistinctly conceived. The historically contemporaneous birth of the English novel and of the experimental method in science turns out to be no coincidence. Without making the naive claim that art and science are in any sense ‘doing the same thing’, the narrative similarities in the experience of those who work with them are remarkable. They need digging out because they become obscured by scientists shy of talking about imagination and artists about experiment.

The project of listening to anyone who creates – be it with music or mathematics, oil paint or quantum theory, and the creative power of the constraints they encounter – itself became my book project. Yet in a strange obedience to the pattern of its material, the originally imagined plot of The Poetry and Music of Science refused to play out. Juxtaposed catalogues of creation-stories in science and art, followed by an extended ‘contrast and compare’ essay, increasingly failed to do justice to the material. Historical and contemporary sources were telling a very different story about creative imagination, one that didn’t divide across the worn-out lines of ‘The Two Cultures’. Instead, a pattern of three ‘modes’ of creative expression seemed more faithful.

The first mode of visual imagination is, of course, the chief source for the artist, but the same is true for many scientists, from molecular biologists to astrophysicists. Astronomy is the provider of the original projective perspective. If the observer of a painting is asked to recreate a three-dimensional world from a representation or impression on a two-dimensional canvas, then the task of ‘seeing’ the Universe from the picture that we call the sky bears clear structural resemblance.

A second mode is textual and linguistic. The entanglement between science and the written word in prose or poetry might possess a principle knot at the birth of the novel, as we have already noted, but its story is a much longer one. It also has an ‘alternative history’, envisioned by the poet Wil-
liam Wordsworth in his preface to the *Lyrical Ballads* (1798) and surely Johann Wolfgang von Goethe and Alexander von Humboldt before him – in which: “The remotest discoveries of the Chemist, the Botanist, or Mineralogist, will be as proper objects of the Poet's art as any upon which it can be employed, if the time should ever come when these things shall be familiar to us …” With notable exceptions (such as R S Thomas and occasionally W B Yeats in poetry, and the ever-present fluttering trespass of Vladimir Nabokov's beloved butterflies from his scientific work into his novels), this early Romantic vision has sadly yet to be fulfilled, and is surely frustrated by the very desiccated presentation of science with which we began.

Imagination's third mode appears as both pictures and words fade away. For there, when we might have expected a creative vacuum, we find instead the wonderful and mysterious abstractions of music and of mathematics. This shared space is surely why these two have something in common – it is surely not their superficial sharing in numerical structure that links melody and harmony with mathematical structure, but their representational forms in entire universes of our mental making.

When a journey has taken one to as reflective a place as this, it is but a short step to recognise the need for interdisciplinary thinking to make sense of it all. The anthropology and cognitive neuroscience of creativity is fascinating, the one taking us to the stone tools of our distant ancestors at the dawn of humanity, the other to the delicate balance between the analytic left hemisphere of our brains and the integrative right. The philosophical tradition is equally rich, discovering, for example Emmanuel Levinas's suspicion of the visual mode for its implied distancing, preferring the vocal or auditory for its immersion of subject in object. The phenomenologist tradition from Martin Heidegger and Maurice Merleau-Ponty to Hannah Arendt speaks of a relational mode between the human and nonhuman that deploys both art and science to describe nature as if it were the product of human imagination. As the literary critic George Steiner wrote in his *Real Presences* (1989): “Only art can go some way towards making accessible, towards waking into some measure of communicability, the sheer inhuman otherness of matter …”

I could say precisely the same of science, so how might a richer appreciation of the service provided by the creative imagination in science be developed in a practical way? There are consequences for both practising scientists themselves, and for the wider community.

Reflecting on my own formation as a professional physicist, I cannot recall a single hour spent during my doctoral or postdoctoral training on even as instrumental an aspect of creativity as the discussion of working practices or lifestyles that might enhance the vital creative flow of scientific ideas. Yet there is much to be said: the regular engagement with the visual and auditory, the alternation of sharp mental focus and integrative defocusing, the allowance for fallow periods when working on a problem – all these are worth talking through early in a scientific career.

More widely, the contemplative good of lay science, of engagement with high-quality scientific writing, including the poetic 'notable exceptions' – John Carey's *The Faber Book of Science* is a good (1995) – recognising that science holds as deep a structural place in human culture as art does, will only enrich and enable. By exploring other avenues into science than the formally educative – its history and philosophy, its deep ideas simply put, and a rediscovery of the joy brought by acute observations of nature – more people might discover that the notion that 'science is not for me', too often acquired early in life, is simply a cruel deception.

The *Poetry and Music of Science*, by Tom McLeish is published via Oxford University Press.

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Exploration

In this section we briefly explore an area of creativity that is topical in a particular discipline. We begin by posing a question from a practitioner in that discipline, “I’m curious about...”

If you have a question you would like to pose and/or answer, please contact the Editor at philip.dennett@nd.edu.au.

Gen Z are re-defining how to understand and target audiences

Gorgia Brewer, Strategy & Content Director, Media Precinct

The next generation (up to 24 years of age) are driven by a different set of motivators than their predecessors. Because of this, understanding audiences has become more important than ever. With some target groups switching off completely, the need for research is critical to develop a deeper understanding of what audiences are interested in, where they are, and how to target them.

At The Media Precinct we worked with multiple data sources, publishers, and focus groups to develop an understanding of people under 25. Clear trends have begun to evolve within Gen Z, who are displaying an angst-like reaction to current issues and political movements.

Refusing to be defined simply by traditional demographics like age, gender or location, youth today are defined by what makes an impact on society or themselves. Searching for authenticity and thought behind every move, they are the first generation truly unapologetic of their opinions and movements which they believe define what they identify with. Shunning the idea of traditional success, marriage and degrees don’t influence their decisions.

Having grown up with technology at their fingertips, they are extremely aware of how marketers and brands are able to manipulate their data. Because of this, they are extremely protective of what they share, more likely to turn off services like geo and mic access to any app unless they are using it.

This audience don’t push diversity as they are inherently multicultural and accepting of different opinions and approaches to life. Communicating via image based services, they want to work towards their own success rather than expecting it to be handed to them.

With diversity ingrained into youth, audiences now notice the lack of diversity within programming and advertisements. Concentrating on socially neglected topics and issues such as menstruation, motherhood and aging are allowing brands and consumers to get real about the human condition. Brands such as Thinx are seeing great success across this emerging audience by championing taboo topics, with consumers showcasing their support across conversation based platforms.
Due to their lack of patience when people or brands are not viewed as authentic, cancelled culture has grown in popularity over the past five years. Influencers such as MannyMUA have seen the full force of young people coming together to stand up for what they believe in, “cancelling” him and others from his group over a fake falling out earlier this year. Youth have developed this radar with a purpose of calling out people, brands and groups who are not living authentically.

One of the most educated generations to date, this audience is pushing the boundaries of what it means to apply base knowledge. By traditional pathways or otherwise informed through owned sources, youth today are progressive with their thinking and application of their base knowledge, now viewing education as lateral understanding rather than category based.

Gen Z are extremely opinionated on specific topics. According to Junkee Media’s 2019 research piece “A Gender for Change”, 95% of youth care about sustainability, and believe it needs to be addressed urgently. But today, sustainability refers to much more than just how we interact with the planet. Mindful living is on the rise, and encompasses every part of Gen Z lives. From natural medicines, to cruelty-free products and produce, youth are making mindful decisions to refuse anything that is seen as harmful to their environment and those within it.

Brands are capitalising on this mindful living trend with time based promotions, engaging with periods of reduction or detox. For example, Grill’d Healthy Burgers has implemented a full alternative meat menu, originally for one day only, as a part of their permanent menu to promote “Meat Free Mondays”.

Youth have become mindful digitalists, exploring the real world to escape the digital world built by previous generations. Going off the grid to find themselves, we have reached a pivot point in society with real life experiences driving actions within young consumers. Trying to find communities and truths that make them feel whole, young renegades have made the increasingly popular Dark Mofo in Tasmania a destination to experience life and technology in a completely different way. The use of technology as art has shifted perceptions of how it impacts our lives, with festivals of art and music showcasing the positives that technology can bring us.

It’s no longer good enough to talk about socially charged subjects. Brands will need to develop their messaging and create a physical impact before they are able to promote it to younger audiences, who are embracing brands with an opinion. With new social shifts emerging each day, brands that champion a specific topic or cause will be celebrated by the youth of today. With their increasingly powerful buying power, and reactionary nature, this is an audience worth having on your side.

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**Call for papers**

**Volume 2 No 1**

**Deadline for submissions will be May 30, 2020.** Interested authors should, in the first instance, email an abstract that includes implications for management and practitioners, to the Editor, Dr Philip Dennett at philip.dennett@cud.ac.ae