DBA thesis

Transforming the delivery of learning in a rapidly changing digital environment and the evaluation of the consequent benefits

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Transforming the delivery of learning in a rapidly changing digital environment and the evaluation of the consequent benefits

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Abbreviations

ARC - Action Research Cycle

AR - Action Research

BYOD - Bring Your Own Device

ENQA - European Association for Quality Assurance in Higher Education

EHEA - European Higher Education Area

ESG - Environmental, Social and Governance

EQA - External Quality Assurance

ESG - Standards and Guidelines for Quality Assurance in the European Higher Education Area

FTE - Full Time Equivalent

GDPR - General Data Protection Regulation

HTML - Hyper Text Markup Language

IQA - Internal Quality Assurance

IQAS - Internal Quality Assurance System

OWL - Ontology Web Language

KYC - Know Your Client

L&D - Learning and development

PwC - PricewaterhouseCoopers

QAF - Quality Assurance Framework

QMS - Quality Management System

RAG - Red, Amber and Green

RDF - Resource Description Framework

RDFS - Resource Description Framework Schema

RPL – Recognition of Prior Learning

RSS - Really Simple Syndication

SOP - Standard Operating Procedures

SCORM - Sharable Content Object Reference Model

VLE - Virtual Learning Environment

XML - Extensible Markup Language

Acknowledgement

As I reflect on the path that led me to this place and time, there are people whom I would like to take this chance to express my gratitude to and I would like to do it now. There is no doubt that I would not have been able to finish this research without the assistance of the people mentioned below.

To begin, I want to express my gratitude to my family for all their support. They have never wavered in either their encouragement or their belief in me over the course of these last years.

I would like to express my gratitude to Professor Andrew Mayo for the direction and assistance he has provided me with over the years, as well as for the insightful, intellectual, and persuading qualities he holds, his attention to detail, and for simply listening to and reflecting on my goals and objectives. In addition, I would also want to express my appreciation and recognition to Professor Ifan Shepherd for the fact that he was there for me whenever I required assistance and always took the time to support me.

Dedication

This work is dedicated to my family, close friends and colleagues for their support and encouragement throughout this learning journey.

Abstract

Relentless technology development has been the principal catalyst contributing to an exponential rate of change in almost everything we do. The use of technology in training and learning, stimulated by forces induced by the global pandemic, led to unprecedented adjustments to training models. Across all industry segments, digital transformation has disrupted established market forces leaving many organisations dealing with evident uncertainty. A contributor to this was the lack of workforce preparedness for new demands on skills and capabilities. In the context of the local economy such change has had profound implications on the future of training industry.

This research studied the learning transformation project that enabled a core change in the training business model operated by the Training Academy (MT) at PricewaterhouseCoopers (PwC). I assumed the roles of an embedded action researcher and leader of this project. I led the design and implementation of a transformation journey from the long-established mode of operation into a new organisational learning model that prioritises knowledge and quality excellence as its fundamental elements. The project lasted thirty months and followed the model of "action research", with stages from diagnosis, to designing, implementing and evaluating the change intervention at the PwC's Academy.

The action research cycle built on quantitative and qualitative measurement initiatives. These enabled me to set the right benchmarks against which a variance could be analysed at evaluation and reflection stages. Figure 1 below depicts the action research stages pursued by this change project.

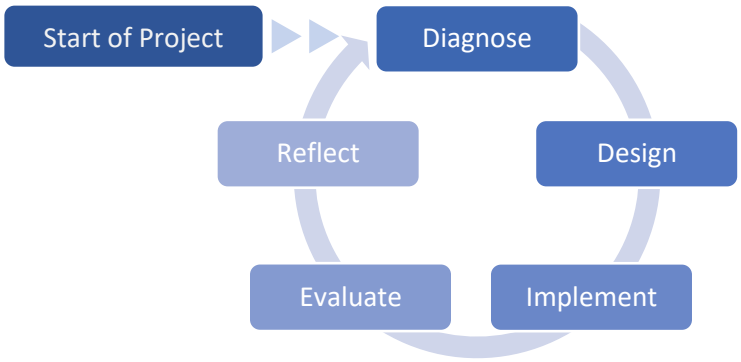

Figure 1 Action Research Stages

A key aspect of this project was the learning and development of the Academy team that enabled the transformation to take place. Analysing the levels of knowledge and skill at the final stage of the

project against the benchmark set at the beginning of the project indicated that the team had acquired significant new knowledge and capability. Statistical analysis showed that the null hypothesis, that the outcomes occurred purely by chance or coincidence had a negligible probability. These team learning outcomes exceeded my own initial project expectations and suggested that the project rollout, which was meticulously diagnosed and designed, successfully addressed the gaps against the desired model. This was also clearly corroborated by the evaluation and reflection stages.

The transformation project was delivered in all its phases in line with a changeover plan based on an articulated and agreed approach to change management, that was diagnosed and planned as part of the opening initiatives. The time and effort invested in the team delivered positive results in terms of involvement, motivation, new skills and capabilities acquired, leading to an efficient operation. The challenge of this project was to secure an effective client-centric approach by determining the best course of action to ensure an optimal holistic service to every Academy trainee or corporate clients making use of its services. Notwithstanding the unanticipated business context this project has registered positive outcomes both in terms of the operational and the academic objectives that were established at the start of the project.

In conclusion, this change project enabled the Academy to improve its services by enhancing personalised training that met better the needs of both individual as well as corporates. The new business model provided a more agile and adaptive setting that could respond better to market changes. This project resulted also in efficiency gains both in terms of administrative effort as well as in terms of trainee satisfaction rates. The agility around the new model enabled higher resiliency making it easier to reframe problems when faced with unexpected situations. Complete engagement of management and the formation of guiding coalition team, coupled with an organised transformation roadmap proved to be successful. The importance of having clear quality benchmarks as an end goal is also an important aspect to such change projects. Finally, the embedded use of data in managing such projects coupled with the right learning environment and team knowledge investment have the potential to yield significant growth.

Further research may consider investigating the ways in which institutional policies can promote or inhibit the transfer of knowledge from the trainee to the place of work within the context of a socio-economic analysis.

CHAPTER 1 - Introduction

1.1 Organisational background to the project

The research project undertaken focuses on revising the training business model employed at the PricewaterhouseCoopers's (PwC's) Academy[1]. The project follows an action research cycle that is organised into various phases starting with a thorough diagnosis leading to the planning of changes, implementation and evaluation. The diagnosis aimed to establish the strengths and weaknesses of the established model before commencing change.

The Academy is a licensed organisation providing learning and training which forms part of PwC, a "big-four" firm that operates in the Maltese territory. PwC is a multinational professional services network of firms having its headquarters located in London, United Kingdom. PwC ranks as the second largest professional services firm in the world.

PwC is present in 156 countries and 725 locations engaging over 295,000 employees worldwide. At present close to 30% of its skilled workforce is located in the Western European area. In its last financial year, the firm's global revenues were estimated at around $45 billion (PwC, 2021). At a local level, the firm engages circa 700 employees of which 14 are directly operating within the Academy space. The firm provides a portfolio of professional services including: Assurance, Financial Advisory, Strategic Consulting, Data & Analytics, Management Consulting, Technical Advisory, Actuarial, Legal and Training services.

For the past fifteen years, the firm has operated a training Academy predominantly in the business areas closely linked to the expert services traditionally offered by the firm including: aspects of advisory, assurance and technical accounting. The Academy has a valuable function in the ecosystem of the firm as it provides an important stage for the firm's expertise, enabling it to establish itself further as a leading business specialist as well as a thought leader.

[1] Referred to as 'The Academy' throughout the research project dissertation

PwC Malta is today a diverse business organisation engaging with clients who require a myriad of specialist knowledge, skills and competences to help them thrive. The client organisations of PwC Malta require a number of regulated services from consulting to accounting or assurance, but also other services supporting organisational growth. The context of a rapidly evolving digital business community and the enterprise level development of new products and services has become progressively more innovative and international. This has noticeably increased the breadth of support services needed by the firm. Such services include the growth of knowledge capital and training management services provided by the Academy in a constantly changing business climate.

As part of its corporate social responsibility, the Academy strongly sustains the firm's commitment towards community engagement and social wellbeing particularly in the context of training organisation and delivery whilst at the same time strengthening the organisation's own human capital. This project has the ambition of positioning the Academy as a more influential player in the technical training industry by establishing itself further as a leading trusted source of information in the business of learning. This research project has enabled the transition of the Academy from providing standardised legacy training to seeking information and learning about best practices and innovative approaches.

1.2 The Changing Context of Learning

The three main terms that describe the paradigm of contemporary society are information, knowledge and communication. In today's digitally driven economy standing still truly means that one is falling behind. The community of professionals supported by the services such as those in the learning and training space provided by the PwC's Academy have been aiming to transition from an information to a knowledge society. At the same time the formation of a knowledge society implies understanding present and future needs whilst charting a sustainable and efficient way forward. The problem that this research project aims to address is how the Academy can itself change to develop a model that provides new and improved dimensions to the learning process that meets the requirements of an evolving knowledge society. The Academy has recognised that the digital opportunity has transformed all facets of our society, not least the professional work environments that enable the economy to grow and prosper. The PwC Academy's role over the years has been to support this transformation through its practitioner approach to training, ensuring that the strategic initiatives and aspirations of its clients or trainees could be met by supporting the growth of their respective human capital. Integrating technology into training and learning is not something new, however the exponential rate of change and technological advancement is rather unprecedented, with the result that digital technologies are always aging quicker and therefore solutions would need to be revisited more frequently.

The objective of this project, conducted within an action research setting, is to establish a comprehensive change model. This new Academy model will be developed thorough an evaluation and transformation of the existing training delivery system, including its fundamental infrastructure, reimagining all work processes, delivering a team upskilling programme, and establishing a new quality framework and benchmarking measures. As a result of increasingly pervasive technologies that tend to bring more business disruption, the training and learning trends at community level do play an important part in foreseeing talent market needs with a view to prepare individuals and organisations to be more capable of adjusting and solving problems brought about by new market opportunities and challenges. Solving problems in the context of the digital economy is no longer about delivering exclusively the generic training that develops standard skills sets and basic knowledge, but new training models need to find ways to deliver complementing knowledge-generating abilities that are transferable to the workplace. The new training model aims to provide to the trainee alternative methods of applied learning that could raise the critical awareness of one's thinking and learning, enabling every individual trainee making use of the Academy's training services

to develop a stronger ability to use and share skills that address a broader spectrum of business requirements.

1.3 The Academy

Since its establishment, the Academy has provided expert training services to corporates, professional teams and individuals. The services rendered include the development of effective training plans for corporate organisations, designing client-centric targeted training programmes and running a suite of certifications in collaboration with international strategic partners, contractors and the global PwC network. The Academy serves also an essential internal organisational function with the objective of supporting the continued growth of skills and competence diversity of the PwC's current workforce and potential future employees through intern programmes. Training provided is aimed at reskilling and upskilling the various teams and functions from across all the firm's service lines.

Latching on to the firm's corporate business objectives helped the Academy mature and grow in an organic way. The Academy learned from the various experiences and consistently got better at what it does best. With the introduction of this project that served as a catalyst for change a major transformation kicked in that altered the Academy's way of working by leveraging digital innovation, renewing processes and enabling individuals to grow as accomplished professionals. The focus of this change project was that to broaden the channels, methods and scope of Academy's training offering to sustain an ongoing drive for change within the various business communities and deliver consistent quality and value to every individual.

Through this project, the team at the PwC's Academy embarked on a new learning experience essential to bring about a fundamental structural change. This research project set out common objectives to be met by the Academy team, leading to a change process that leveraged the use of technology, a series of new work processes and innovative training opportunities. The project was key to stimulate the team to shift from the previous prescriptive procedures and routines to a more open participative learning organisational setting. The project stimulated a makeshift towards a more collaborative work setting, allowing each individual to engage, share knowledge and complement skills held by others within the team.

Team learning was a significant aspect of this study as it contributed directly to the breadth, flexibility and efficiency of the Academy's service offering. The reason for prioritising team learning as part of the project's priorities was because learning and enterprise knowledge contribute directly to the Academy's value, creating a new level of expertise developed between members of the team as with others external to the team yet part of the firm. In view of the Academy being only a subset of the local organisation, connecting and learning from various PwC professionals as well as external experts assumed added importance whilst implementing this project.

Another aspect making team learning an increasingly important goal was the digitisation transformation effort itself. The development and availability of additional functions introduced new variables and processes that changed the way individuals operate. The technology-based platform introduced changes in the processes around trainee registration, onboarding and engagement, training content creation, assessment and certification amongst other areas. The project served as a catalyst to consolidate and integrate a number of independent legacy processes and services into one solution. These included trainee enrolment, trainee cohort management and payments amongst others. More details about the introduction of new features and processes as part of project implementation will be described in subsequent chapters.

In addition to digital and team learning, the research examined the overarching significance of knowledge management. Managing the core characteristics of knowledge management was key to ensure that the methods chosen delivered the organisational business transformation objectives set out for the Academy. The new vision could only be achieved if the planned changes enabled efficient team learning sustained by the right individual motivation.

The organisational design at the Academy is lean and operates through seven distinct roles engaging fourteen individuals as shown in Figure 2.

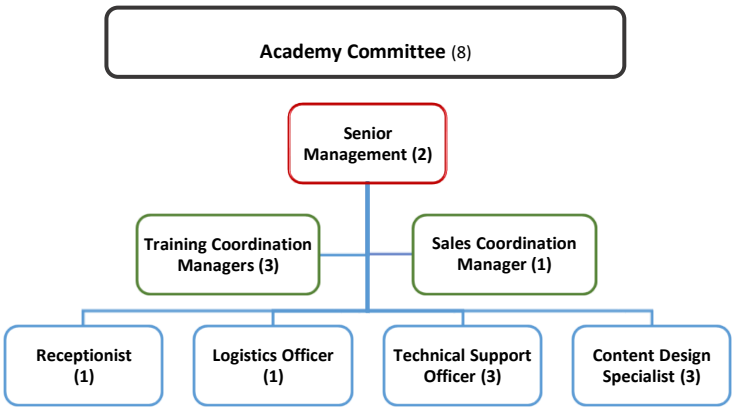

Figure 2 Academy Organigram

The roles outlined in the organigram make up the current Academy team[2]. The positions, designations and related role responsibilities were subject to substantial changes following the implementation of this project. It was anticipated that the Academy team could grow organically to address a broader business portfolio and training curricula without excluding the need to bring in additional talent to

[2] Occasionally referred to as 'the team' throughout the entire report

meet additional training demand. The team proved to be highly resilient to the changes introduced by the project implementation whilst adjusting to the general business context brought about by a global pandemic. This project paved the way for the Academy to revisit and redesign roles, skillsets and processes needed to ensure an efficient business operation is established. Details of the Academy roles are defined in Appendix B.

There are two senior roles in the Academy. I and my colleague report to the Academy Committee, which consists of 15 members. This Committee is responsible to provide strategic direction to the Academy whilst monitoring progress registered along any given financial year. I have been in this role for 4 years and have been able to lead the Academy concurrent to taking a role as embedded researcher for the purpose and duration of this project where I combined managerial responsibilities with the research perspective. In this role, I am directly responsible for the development of long-term training plans and policies that align with the firm's vision and goals for the Academy. My role is also responsible for the general administrative and financial management as well as promoting innovation and continuous improvement, particularly in digital instructional design and development. This includes exploring new training methods, technologies and practises to enhance the overall quality of training offerings.

This dual role not only allowed for an enhanced understanding of the organisational dynamics but also facilitated a practical application of research insights. The collaborative involvement of the entire team ensured a holistic approach to the action research. A second senior manager operating at 0.5 FTE focused specifically on business development leads and corporate client relationships, I guided the team through the change process. My leading role in this project mirrored closely my key job responsibilities in relation to all business operations and delivery aspects of the Academy function. The full resource complement employed at the Academy were involved in this project from design stage through to completion. Working closely with every individual professional became part of my day-to-day practice assuming a coaching role whilst fronting the research.

The design of this thirty-month business plan to proceed with this Academy transformation initiative was presented for consideration and approval of the Academy committee. Formally, the Academy reports to the PwC's Academy Committee, a top executive board made up of the firm's Territory Senior Partner, an additional seven representative partners as well as a number of managers from complementing service lines. The Academy Committee is a structure responsible for providing the Academy with a clear strategic direction. The Academy Committee meets twice every quarter in a formal setting and reviews work output, projects development as well as budgets on an ongoing basis.

This project brought about a comprehensive change in business mindset with new skills and competences acquired by the Academy team enabling the new training service model to be operated effectively.

1.4 The market context in which the research took place

The context in which this project took place was exceptionally atypical. The end of 2019 saw a global pandemic disease spreading itself very quickly across the globe causing a severe acute respiratory syndrome. This pandemic brought about a general health crisis that in turn has significantly tested the agility and resilience of both local and international organisations. The virus had its first major impact on local business during the month of March of 2020 with the authorities imposing a mandatory national lockdown. The situation that emerged on the one hand forced a deeper look at the underlying assumptions specified in the design of this change project, whilst at the same time created a new business scenario for the Academy, its clients and the learning market at large.

The impact of the Covid-19 pandemic on the learning and training space was immediate and considerable with technology and innovation taking centre stage presenting training organisations with a potential solution in addressing the new needs of a changed reality. While remote work was a feature that PwC, being a multinational firm, had already experienced with whilst collaborating on international projects among other instances, the pandemic forced organisations including learners and trainees to an all-remote relentlessness effort, resulting in a struggle to adapt to an intense virtual collaboration and its underlying technological infrastructure.

Research and data to gauge and assess the effectiveness of shifting learning and training to a completely virtual setting as constrained by the pandemic was still emerging, giving rise to many assumptions about which services were feasible for the Academy to offer in an online distributed setting. As the project moved forward in this dramatic regime change, an iterative evaluation of the combined tasks, team and infrastructure became an integral part of the change process.

The pandemic left no option to the Academy team but to shift to working remotely for a prolonged term. The project brought about innovation that was intended to be centred around mutual knowledge and clear understanding of tasks among all roles within the Academy team. Team dynamics and the implications of virtual collaboration at times made carrying out technology improvements more challenging. The organisation was shaken as daily working routines that had been embedded in everyday process for decades were disrupted within days. All this gave rise to understated shifts in the types and nature of problems that each team had to solve.

Conversely, the pandemic contagion has also heightened technology adoption behaviours. At a PwC corporate level, Covid is credited with a fundamental transformation of the digital infrastructure of business. Greater technology support to the various service lines including the Academy became top

priority. This aspect supported the implementation of this project in a direct way and at a pace that was not experienced before.

The way the market evolved soon after the start of the project introduced many unknowns and raised multiple questions such as, “will businesses from all market segments become digitally enabled across all aspects of business?” “Would it be a risk that time compression could mean that the Academy may overlook important aspects of the business model?” “Could large-scale digital adoption behaviours mark fundamental changes in attitudes of society and introduce a renegotiated equilibrium that may affect training and its impact on professional services?” Risk management questions grew by the day.

1.5 A changing training and learning landscape

Finding the right motivations to learn in the context of a digitally renewed environment presented a number of challenges both to individual members of the team as well as the team as a whole. Along the years, emphasis had been placed on the importance of learning to support collaborative organisational capability and achieve longer-term sustainability. The ongoing challenge to learn from experience and respond to complex evolving business requirements had been already evident over the past years. Notwithstanding that many organisations engaging the Academy for training services demonstrated widespread support for learning as a standard way of upskilling their respective workforce in terms of capability and processes, the approach to learning had often been applied in a disconnected manner.

At various instances it was acknowledged that the training and learning landscape was changing along with the needs to improve and better address learning goals, attitudes, mindsets and business outcomes. Dealing with 21st century learning and training meant that businesses needed to better leverage a renewed trainee-centred learning environment, innovative content, new methods of training, complemented with a higher degree of personalised learning for different types of learners. The Academy aspired to contribute to supporting individuals, organisations and communities to build capacity by learning collaboratively through situations of change and uncertainty. Research has produced evidence to suggest that knowledge sharing may be challenging. Difficulties in sharing knowledge may be due to language barriers, the locus of practice and the respective conceptualisation of services rendered. (S. Qureshi and P. Keen, 2005). Over the past years, the firm's training arm through the Academy within PwC has aimed to support greater knowledge sharing with this project seen as a further catalyst to such change.

The Academy has over the past decade grown its business offering organically, and frequently taking a reactive adaptive stance to changing business needs. The timing of this project came at a very significant juncture where the Academy's training model necessitated review with an aim to embrace a more appropriate and forward-looking application of technology. No one at the very early stages of this project had envisaged the need to strengthen digital tools-based training which would become lifeblood almost overnight because of the global pandemic. Within weeks, this project changed its credentials from 'important' to 'indispensable'. The central reason for this was the increasing number of clients resorting to the use of digital solutions to address their holistic business and training needs. This digitalisation aspect ramped up very quickly and is expected to gain more momentum in the coming years as disruptive forces surrounding the digital market continue to evolve.

In addition, an equally important driver and enabler for this organisational change project was an evolving business strategy and vision of the firm globally. Embracing digital transformation in every aspect of business has become an indispensable requisite particularly in areas where the firm currently holds an important service offering. Had the PwC's Academy failed to rethink its training offering and the respective relevance to the market on a regular basis, it would run the risk of becoming irrelevant over time, particularly in today's fast changing business landscape where a number of organisations struggle to survive the impact of a dynamic and evolving market.

Another key reason for undertaking this project relates also to the need for more research into ways of increasing effectiveness in the field of training at industry and community level. Over the past decade, Malta has sustained continuous economic growth that led to unprecedented shortage of a skilled labour force in a number of industry segments. This capacity shortage coupled with further forecasted growth across various industries led to deal more actively with aspects of reskilling and upskilling of the existing employable workforce. It has become clearer that aligning human resources, processes and technology initiatives will become increasingly critical to each organisation's business strategy and vision. In the context of PwC's local operation, the Academy is one of the service lines that is continuously introducing concepts of business redesign, feeding into the rest of the firm's capability-driven approach when supporting client transformations.

1.6 Quality standards in learning institutions

The environment in which this project developed required a continuous process of quality demarcation. As a result, the approach adopted was to address each specific quality context, while taking into account the perspectives of all parties concerned. It was critical for this project to define the relevant quality characteristics and to describe the appropriate criteria for each aspect of Academy business. Standardising a quality approach meant that an agreement among all the individual roles, views and perspectives was required to achieve a common understanding. As shared by Deming (1986), it is expected that stakeholders tend to have distinct and often contradictory demands and definitions of quality.

During the project evaluation phase, the benchmarking of deliverables against a new quality framework was an acknowledgment of the importance of quality itself. The evaluation and quality alignment process contributed to greater knowledge across the team itself. Designing for quality was a planned activity as part of the project plan, incorporating quality review as part of project design. The requirements and obligations emanating from the local regulatory guidelines were factored into the entire quality development process. This embedded approach was also necessary for the purpose of achieving long-term and sustainable training quality as a licensed institution.

1.7 The Project: The organisational challenges to be addressed

The organisational problems that this research project addressed focused on the design and implementation of a renewed learning model at the PwC's Academy. The transition in the training landscape objectives to respond to emerging market needs is depicted below.

From	To
Industry or system driven instruction	New trainee-centred learning environment
Established set content	New-found innovative and immersive content
Independent isolated units of knowledge	Effectively sharing subject matter expertise
Standardised approach to learning for all	Novel methods and processes of learning
Confined to a pre-set design	Mobile learning across borders
Fixed training set	Personalised learning for different types of learners

The problems to be addressed listed in this section are closely connected to the evolving business landscape in the learning domain. The main problem statement that this project aimed to solve was to challenge the training methods from one that were designed specifically around a classroom-based setting to a new hybrid to a digital training context. This problem of transforming the training model developed gradually along the years of operation. With the primary focus being that of delivering established certified training, not enough effort went into the rethinking of the training model itself resulting in a training environment, learning methods, content and training assets that needed reorganisation.

The project set out to deliver a new trainee-centred model that would be developed with a digital mindset as part of the core design. The new training model refers to the full system of components at the Academy that enable its focus on learning and training. This new business model was designed to enable every individual team member to interact with the content, data and technology to deliver innovative training experiences.

The research investigated how the design of a new business model could address the requirements of organisational agility and adaptability, a challenge that many business organisations are faced with at present day. Adaptability through learning became increasingly one of the key strategic aspects that also became a significant driver that drove workforce adjustment.

Complementary to the project addressing the main problem statement the transformation project aimed at addressing other problematic areas such as broadening access channels to training. The project aimed also to address siloed knowledge that developed as a result of specialist training areas.

This project aimed to bring in stronger leadership to effectively enable team learning while assessing the impact of the change management model employed whilst studying the changes in effectiveness of intra-team collaboration.

1.7.1 Project Research question, Aims and Objectives

Addressing the business problem identified, the research statement addressed by this study can be expressed as:

"H*ow can the Academy's training model be redesigned to increase the learning effectiveness and opportunity as well as meet the demands of present and future trainees?"*

Throughout the various stages of project, the changes implemented were aimed at developing a training model for the Academy MT (Malta) that is operationally feasible and one that broadens access to training, intended to increase trainee participation.

Research objectives

To support the above research statement, the following objectives are defined for this action research project:

1. Identify a robust change management model that can be adopted for this project transformation;
2. Defining a roadmap for the steps in the transformation project to manage the implementation successfully;
3. Evaluate the effectiveness of the transformation against established quality standards in the learning space;
4. Maintain a monthly review of the training services take-up by external trainees on the digital platform;
5. Embedding learning within the Academy team gained through guidance, coaching, training and feedback.

1.8 The Academic Research Questions, Aims and Objectives

My position as a senior manager within the organisation and as an embedded researcher gave me the opportunity to analyse a number of academic research questions through the study of hard data as well as the examination of dialogue and personal reflection. This research gave me the opportunity to study the organisational change process required to take forward the business transformation and the corresponding activities, starting with a thorough diagnosis, comprehensive planning, careful implementation and iterative evaluation establishing how well the planned change had worked out. The overall objective of the project was to lead the digital transformation project at the PwC's Academy through an extensive organisational change management process.

Taking a realist ontological approach, I set out to discover through reflection the insights gathered from all individual roles involved daily in the adoption of the newly implemented business model. The main emphasis was on the process and methods used to enable digital and hybrid training with a specific focus on continuous and iterative team learning as opposed to a linear sequential approach. During the course of the change implementation, the academic research statement linked well to the actual execution of the project to transform the Academy. The academic research questions that required study are listed below.

- What insights can be gathered from community experts and trainers in relation to the new training requirements as a result of the digital market changes, and can these be classified?
- Within the context of this specific business transformation, what can be learnt about the effectiveness of team learning alongside individual learning?
- Which tasks or applications of an individual's understanding of specific concepts or skills can be used to confirm subject mastery?
- To what extent do the chosen methodologies for the transformation process produce a stronger state of readiness and agility for future challenges?
- How effective will the new internal quality assurance policy in terms of current and future working paradigm?

The objectives of this research included observation and exploration of team learning processes and the extent of this development, within the context of creating a better skilled Academy. This analysis and evaluation of knowledge management processes included both individual and team learning outcomes. The reflective process as part of this project helped me understand better the individual experiences and related narratives of all members of the team. Stemming from this effort, I found

myself well positioned to gauge better how a more collaborative work setting would enable each individual to share knowledge and complement the skills held by others within the team.

As the project evolved, I set out to discover how the newly acquired skills by the team enabled a new blended training approach that brought together traditional, digital and virtual training in a seamless learning journey to every trainee. Through this research I aimed to explore the responsiveness of the Academy to a more open learning organisational context. More specifically this study allowed me to evaluate learning processes and the different learning style of every individual member of the team.

Beyond the redesign of the Academy's business model, the project represented the perfect opportunity to review the change process at the corporate and strategic firm level. This was a prerequisite to take forward the change initiatives and complementing activities. The approval process preceding the approval by management to engage with such change initiative was subject to internal firm-based political influencing particularly in terms of the management's considerations, garnering support to implement organisational change. The implementation of this change management model was based on available literature in this space challenged by every situation that developed, and the course of action taken as part of the transformation.

1.9 Structure and Timeline of the research project

The project investigated the Academy team's growth and development as part of a new comprehensive training model. As outlined in Figure 1, the structure of the action research methodology followed a change process that through one main cycle navigated stages from diagnosis to evaluation. Whilst chapters two and three examine the literature review and the research methodology respectively, the subsequent chapters four to seven accompany the project milestones from diagnosis to analysis and conclusions. Chapter eight reflects on the lessons drawn from the project outcomes with a brief summary of the project in chapter nine. The implementation initiatives were connected and dependent on one another with the project moving forward taking an incremental development approach. The elements of this research include the activities outlined in the timeline below (Appendix A holds an enlarged version of Figure 3 below). From February 2020 it continued alongside the background restrictions and constraints of the COVID epidemic.

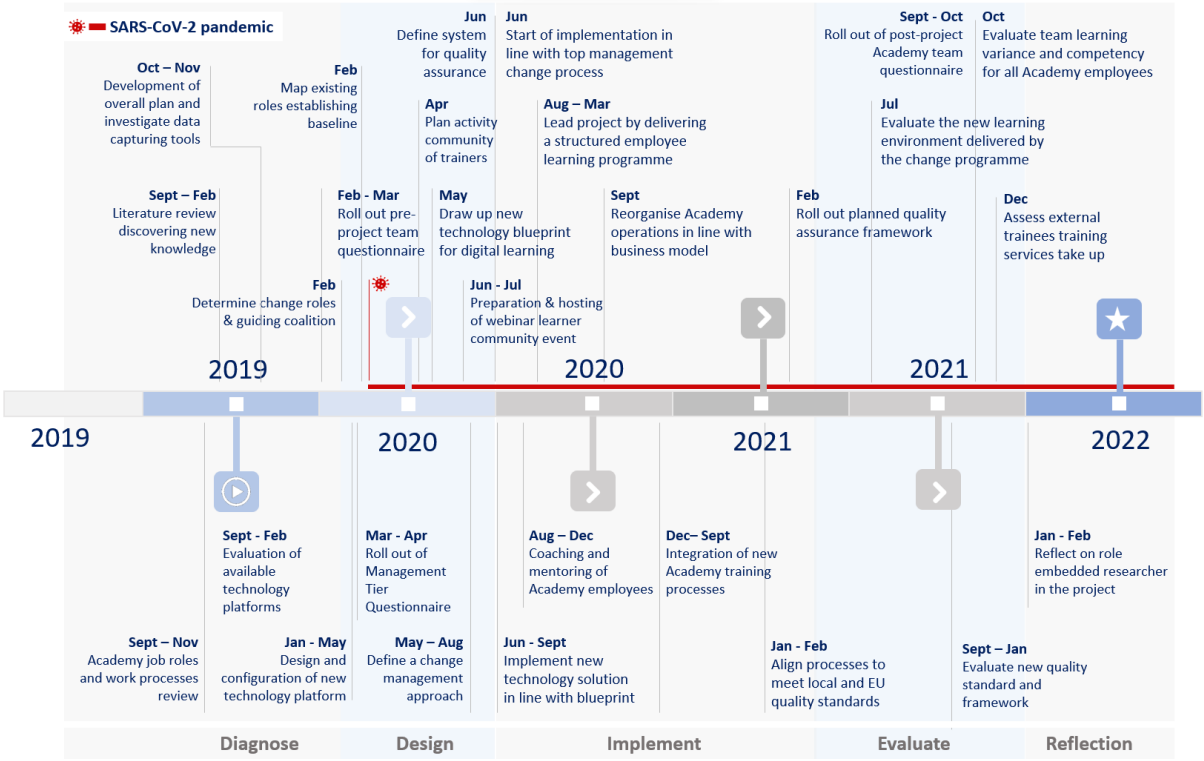

Figure 3 The change project timeline

The activities categorised within the respective action research stages are described in the sections to follow.

Stage: Diagnosis

- Literature review and the discovery of existing knowledge.

The initial months into the project included a thorough review and critical examination of published literature relevant to this research. The review took a comprehensive approach that sought to identify, evaluate, and synthesize existing knowledge in the space of training. This early review allowed me to uncover gaps in my knowhow and gain a better understanding of the current state of knowledge in a field. The literature review was an important component allowing me to discover new knowledge and building connections between existing ideas and concepts.

- Development of an overall plan and data capturing tools.

The project initially focused on the requirements necessary to this transformation and to establish which elements required transformational change and which aspects of learning entailed adaptive change. The planning activities including the design of data capturing tools coincided with the rapid rise of the SARS-CoV-2 pandemic. The pandemic itself introduced new variables that had to be dealt with, providing a clear need to make more intensive use of digital options available. The development of a detailed plan and the design of specific measurement tools were an integral part of this initial project effort (Quarter 4 - 2019). The Covid virus affected the project planning effort mainly in relation to urgency and team dynamics. Covid did not alter the planned activities or deliverables of the project, given that the core of the project was the drive towards a new business model that leveraged technology and digital channels. In this respect SARS-CoV-2 pandemic created a greater need for such a project and therefore could be considered to have been a supportive ally. This plan paved the way for start of the project and was fundamental to establish the timely running order of activities with all stakeholders.

- Evaluation of available technology platforms.

Evaluation of available technology platforms was an important activity to be held early on in the project as it facilitated a more comprehensive understanding of how the specific requirements as well as the goals of the project could be achieved. The main areas considered when evaluating the available technology platforms included, functionality, operating cost, ease of use, performance, flexibility, vendor support, integration, security management and accessibility. The right platform could be selected based on these specific criteria.

- Review of Academy job roles and work processes.

The Academy job roles and work processes review was a comprehensive evaluation aimed to identify areas where improvements could be made, such as enhancing efficiency, streamlining processes, and optimising resource utilisation. The review included a close assessment of roles to gain a better understanding of the responsibilities and challenges that exist within the present-day work processes. The outcomes of the Academy job roles and work processes review lead to updates in job descriptions, linked to new processes, and the interaction with new technologies. This process contributed directly to enhance the trainee experience and remain competitive in an increasingly crowded training landscape.

- Investigating team knowledge through a pre-project Academy questionnaire.

As part of the team diagnosis, an initial Academy team questionnaire established a baseline at the beginning of a project to facilitate subsequent assessment of change, progress and success. The process involved evaluating the current state of the team members and identifying the initial standing of team knowledge needed to successfully complete the project. This pre-questionnaire was rolled out as one of the first activities to be undertaken. This same questionnaire was subsequently employed at the end of the project to gauge the variance and impact imparted by the project. This pre-project questionnaire captured information about eight distinct aspects of team knowledge.

- Analyse the readiness of the PwC's Academy management team through a questionnaire.

The management questionnaire was developed to establish the state of the knowledge and awareness needed by the management tier to carry out this project successfully. The questionnaire provided the basis for a structured and guided process that promoted a common and shared understanding with all members of management. The approach established the change related stages that would be pursued by the project with a clear aim of providing clear insights on organisational strengths and which areas required major focus. This process brought to the fore a number of differing perspectives about the Academy's transformation approach. As a key reference towards a structured process flow perspective, the questionnaire followed the eight-step model developed by Prof. John P. Kotter (2012) (Described in Section 4.4.1). Using the model to design the questionnaire took into account the strategic agility that was needed to address the requirements of a fast-moving learning world. The management questionnaire represented only that start of a change process and was subsequently followed up with one-to-one dialogues with every member of management going further to the responses submitted.

- Holding a public event engaging trainers.

Analysing the changing learning landscape and the impact this may have on the Academy at the initial stages of this project was not a clear undertaking. The main reason for this was that beyond the internal changes within the Academy, the training landscape was subjected to abrupt changes. Complete makeshifts were required to mitigate the limitations brought about by the restrictions linked to the SARS-CoV-2 pandemic. To call together trainers and learners to a public event represented an opportunity to investigate the macro aspects of change taking place within the community. It was clear already at the start of the project that more pervasive use of digital in learning would alter substantially the methods, channels and modes of training. At the diagnosis stage the purpose, audience, timing, promotion, facilitation and evaluation represented the key aspects.

- Enable and facilitate an online interactive learners' community event.

An online event was held on the 2 July 2020 entitled 'Transforming Education for the 21st Century'. The title was complemented with an interesting agenda and a professional line-up of experts set the right expectations for what attendees were set to learn and gain from attending the event. The event was spearheaded by a collaboration involving both local and international players in the fields of training and learning. I directed the event in conjunction with a local expert welcoming the audience, setting the scene, introducing the sessions experts and the interaction questions which created two-way collaboration with the audience. Notwithstanding the ample participation to the event all attendees could actively engage though circular participation by means of features, such as live chat and interactive polls leading to an inclusive and participative session. The event provided a unique opportunity to gather insights and sentiment industry data through the various interactions presented to the audience. The event paved the way to understand better the outer boundary surrounding the project implementation.

Stage: Design

- Map existing Academy roles and processes to establish a clear baseline that serves as a point of departure.

The first action was to identify which roles were involved in every process, including who and which team would be impacted by the process changes. Mapping Academy employees against a complete list of tasks, identifying who is to be consulted or informed, and who is taking decisions was an essential activity as part of project design (Refer to Appendix B – Academy roles). Defining each process impacted by this change project included a series of changes that needed to be taken, the sequence in which each process needs to be completed, as well as any dependencies or prerequisites. Establishing a baseline was achieved by documenting the current state of the process. This baseline provided a reference point for assessment as part of evaluation stage. The baseline data was an opportunity to identify areas for improvement such as bottlenecks in the legacy process, areas of business where performance was below expectations, and areas where there were opportunities to streamline or automate activities.

- Define and design a change management approach that would support the change project implementation.

Change management was an essential component of this project that required significant planning to ensure that it would fully support the implementation. Starting with a clear definition of the change that needed to be implemented, this process included the identification of the reasons for the change, the desired outcomes, and the impact on Academy stakeholders. The change management that was adopted was based on a study of the literature in this area. An understanding of the needs and concerns of all stakeholders impacted by the change was crucially important. Developing the change management plan included the scope of the change, the timeline, and the resources required. The plan included also communication with all stakeholders, starting with the reasons for the change, the benefits, and the impact. The outlined the messaging frequency and the channels of communication.

- Determine the new functional roles to run the system and data focused workshops around process redesign and development.

Identifying the functional roles at planning stage was essential as it enabled more effective system and data-focused workshops to take place. The process redesign workshops ensured that all functions were assigned due importance whilst at the same time analysing the current process and potential improvements. The data analysed investigated each process that each employee fulfilled including performance metrics and customer feedback. Designing the new Academy model was ideated to

support analysis and data gathered during each workshop, leading to new process modelling and system design and configuration.

- Draw up a technology blueprint to ensure the solution platform would meet the new digital learning requirements.

The design of a technology blueprint was required to ascertain that the solution platform would meet the new learning requirements on the digital front. The requirements included online course delivery, interactive learning activities, and online assessment tools. This blueprint design determined whether the technology stacks considered would be capable of supporting the new digital learning requirements. The blueprint aimed to detect gaps or limitations that needed to be addressed taking into account that the Academy systems formed part of a broader portfolio of technologies. It also included definitions of the system architecture needed to support the new technology solution, including the hardware, software, databases, security and network infrastructure. The plan included implementation plan details such as timelines, milestones, and steps needed to implement the new technology solution. In addition, the blueprint design outlined the data requirements aligning to the systems design which included details about data storage, access, user security as well as data backup and recovery procedures.

- Plan activities and interactions with both internal experts and external professional audience from within the community of learners.

The planning of the online event to bring together internal experts and external professional trainers started off with the identification of the event headline, discussion items and interactions to be used. Defining the trainers' persona as target audience was essential for the content to be tailored to their respective needs and interests. Of equal importance was the choice of digital platform to host the event that could accommodate a sizeable number of attendees as well as the required features, such as synchronous chat, interactive polls, and screen sharing. A line-up of prominent speakers able of delivering compelling content were shortlisted. The planning effort included also the promotion of the event to the right target audience.

- Design a coaching and learning programme to support the reskilling of Academy employees enabling them to operate efficiently in the context of the new Academy model.

A coaching and learning programme that supported the reskilling of all Academy employees was planned at design stage. The design of such programme identified the skills and competencies that Academy members would require to meet the goals and objectives of the new training model. The plan considered the most effective training methods of delivery including digital courses, on-the-job

training, coaching, or mentoring. Leading the implementation, I had to consider how I could put my skills and experience to support employee development. The design of the employee pre- and post-project questionnaires would establish a measurement of progress achieved by the end of the project in relation to the coaching and learning programme. The design of this programme was developed around continuous improvement concepts that accompanied the project and evolved based on feedback and evaluation ongoing results.

- Define a system for internal quality assurance that integrates all policy areas linked to the new working model.

Defining an internal quality assurance framework that integrates all the policy areas was essential for the Academy as a licensed institution. The new Academy policies and procedures were to be integrated into the quality assurance system. The design of a new quality assurance model aimed at ensuring that the Academy would meet its objectives based on metrics that are specific, measurable, and auditable. In addition, the planning stage encompassed the development of quality control processes that ensured that the training content, service delivery, and all support processes met the newly set Academy's quality objectives.

Stage: Implement

- Roll out of the pre-project Academy team questionnaire.

The roll out of the Academy team questionnaire too place in June 2020. All employees finalised the questionnaire within the established two-week time window. The evaluation of responses indicated an overall positive outcome across the eight different dimensions of areas investigated through the survey. The outcome of this analysis provided a good impetus at the start of the project and the upcoming transformation effort as it helped establishing a knowledge baseline. This baseline assessment contributed also to the identification of areas for improvement that would be relevant to the project.

- Engage with top management and follow up conversations to consolidate the change process.

From the onset the firm's management was a lead promoter of this transformation project. To manage the transition and at the same time ensure a resilient start to the project an initial structured implementation approach was embraced. The management tier questionnaire that was employed at the start to gauge the state of readiness for this transformation project served as a reference point to align change considerations. The questionnaire flagged different perspectives about the Academy's transformation approach that helped putting a greater focus on specific transformation areas of change within the action research cycle to ensure iterative strategic agility. These follow up conversations promoting further alignment and management collaboration that translated the strategic intent into action.

- Implement new technology in line with the planned digital blueprint

One of the main activities forming part of this project was to implement the digital blueprint. The blueprint requirements established the platform that best matches the digital learning requirements of the Academy to which to build the new digital learning system. The implementation went according to plan without any major disruptions. The platform addressed the key aspects such as system interfacing, scalability and compatibility. In collaboration with the firm's technology team, the system implementation entailed both configuration and programming effort as part of the initial setup, designing of Academy user interfaces and completing the customer experience. The setup process included the integration of various components, setting up of user security profiles and testing the system to ensure the system operates as expected. The implementation process was fully documented including adaptations made to the original blueprint. This approach was duly formalised as part of firm's global application registry making it easier to troubleshoot issues and enabling others to understand how the system was set up. Subsequent to the implementation, the new Academy

digital learning system was deployed on the production environment with regular maintenance and updates over the term of the project.

- The change management methodology selected to implement the project.

The change management methodology pursued followed an iterative action research change model addressing the changing business needs. The framework helped to ensure that planned changes were properly planned, executed, and managed in a way that minimised risks and at the same time maximised the benefits for the Academy. Most importantly, the model provided a clear roadmap for managing organisational change, appropriate to situations with a higher degree of complexity or uncertainty. The approach adopted with the management tiers was a structured one, an approach which the firm felt very comfortable with from an organisational culture perspective. Just like any other framework, the model has its strong points but also its limitations, and for this reason the application and adaption of the methodology to better fit this Academy's change project was necessary.

- Reorganise the Academy's operations and related processes to meet all requirements as part of the new business model.

Reorganising the Academy's operations and related processes to meet all project requirements involved several steps. The initial effort was to ensure that all requirements of the new business model were met from an operational and processes standpoint. The requirements included aspects of a new learning experience, regulatory considerations, quality benchmarks, digital enablement and corporate legal aspects given the Academy is part of a firm that in turn is a global organisation. The approach adopted was that to evaluate existing processes with the objective of identifying gaps between legacy processes and the new identified requirements. Transforming the operations and processes followed a plan of specific actions, timelines, and responsibilities. The changes involved the introduction of new process workflows, updating to a new set of procedures, providing team coaching and support, and acquiring new application licenses and dedicated equipment.

- Lead the change programme by providing a learning environment for all Academy employees.

The project set out to create a learning environment as an integral part of the change program enabling the Academy team to adapt to new ways of working, acquire new skills and knowledge, develop their capacity to innovate and respond to the changing environment. The learning objectives that were identified, aligned with the objectives of the project. By focusing on learning efforts that aligned with the anticipated outcomes of the project, helped each individual to grow professionally.

Most of the effort was directed through workshop-based and on-the-job training. In both cases the training was designed to be as hands-on and engaging as possible aimed at promoting active learning.

The new learning platform itself was used to provide access to digital learning resources to reinforce workshop-based learning. The learning methods encouraged every individual member of the Academy to explore the resources enabled through the platform in their own time to supplement their learning and reinforce key concepts. Through the project every employee was encouraged to continue learning and developing one's skills through ongoing professional development opportunities, mentoring, coaching, regular feedback and performance reviews.

- Deliver a structured training programme to Academy employees to sustain transformational and adaptive change

This change project introduced a comprehensive training program to sustain the professional growth of all Academy team members. This program aimed to strengthen the essential skills and competencies needed to efficiently sustain the new digital learning model in a quickly evolving learning environment. The main aim of this training was to enhance digital proficiency, increase problem-solving skills, and improve decision-making capabilities. The training covered critical areas, detailed in subsequent chapters, providing insights into contemporary digital tools and technologies pertinent to the Academy's business domain. Topics included as part of this structured training programme included cloud computing, basic data analysis, introduction to machine learning and automation, and digital collaboration platforms. Mastery of these tools paved the way to enhance individual productivity, efficiency, and quality service support delivered to trainees.

- Implement the planned internal quality assurance process that ensures compliance to learning standards

A review of all the new processes was introduced as part of the project and benchmarked against a newly established quality assurance framework. The framework included the design of new policies and associated standard operating procedures, that jointly enabled a process that was consistent and coherent. The approach to developing the quality system presented a unique opportunity where every development made in terms of new process could be evaluated and documented. The evaluation and development of the quality standards was workshop-based involving a series of technical focus groups composed of Academy and firm experts that met consistently to review the process design and author the respective policies. This approach allowed for an important reflection-on-action process where the whole change project culminated in new quality operational standards.

- Align the processes implemented as part of the change project to meet quality standards at local and European level

This project evaluated the development of new processes and how well these align with the new established quality standards framework. The internal quality assurance framework aligned with the EU quality framework for educational institutions represented the basis for renewed regulatory licensing. As a licensed institution the Academy's quality framework establishes the legal basis for its accreditation as well as the baseline criteria for quality training and learning delivery. The framework enabled a comprehensive assessment of the Academy's learning content, trainers' preparation, learning methods in use and service delivery, and other complementary activities to determine whether Academy meets the required standards. Monitoring and evaluating the effectiveness of the new processes ensured that the quality standards were being adhered to and that learners received high-quality training that met their needs.

Stage: Evaluation

- Analysing the variance of measured team learning and competences between the start and post implementation (pre-to-post project implementation team questionnaire)

The analysis of team development was a valuable activity because it helped gauge how the effective the project was in terms of enhanced capability to generate learning ideas, share feedback, and manage issues. This analysis was also important as it shed light on how well the team made it easier for learning from one other in terms of collaboration and teamwork. Additionally, the evaluation of feedback gathered helped determine the effectiveness of learning opportunities to cater for the different learning styles of the team members. The analysis contributed to a higher degree of learning assurance, strengthening positive behaviours and determining areas for further improvement.

- Comparing the state of individual competences at the end of the project with that at the start of the project

The change project brought about a clear need for individual reskilling and acquisition of new competences. Acquiring new competences was necessary for each Academy role to take forward the new operating model whilst at the same time meet the newly established quality standards. As output, this project delivered a change in mindset among the team members that embraced more the value of ongoing learning and development. Regular team meetings, training sessions, and individual performance development discussions contributed highly to individual professional development. Throughout the project, a series of hands-on training workshops and mentoring sessions sustained the continuous development of each team member. This interaction with the team was essential to ensure that the team move forward collectively with no one being left behind. This effort leveraged a common approach to new challenges providing me as embedded researcher with an important opportunity to work closely, evaluate and reflect on the learning development of every individual and the team as whole.

- Evaluation of the overall effectiveness of the transformation against the planned objectives and the impact on business outcomes

Part of this transformation project was the identification and implementation of a digital learning platform that sustained the new Academy business model. This new digital model represented the digital backbone that enabled the PwC's Academy to organise physical, hybrid and digital training in a structured and organised manner. The new tools and technology options allowed the Academy to boost productivity whilst providing higher quality training. Without having the right systems in place, measuring the impact of training in today's digital world is challenging. The implementation of the

digital learning platform brought about a higher level of automation that enabled operational scalability without the need for additional resources. The successful implementation of the digital learning platform required an effective collaborative effort involving all Academy team members. The system release allowed the project to leverage the technology and new processes to the benefit of the new Academy model. This led to sustained take up of the new digital services in terms of trainee onboarding that exceeding the expected outcomes by 40%.

- Evaluate the post project status against the internal quality framework

Evaluating the post-project status against an internal quality framework involved a systematic review of every process to ensure that projected quality standards were met. The policies and procedures shaped up the criteria serving a basis for measurement and alignment with the quality framework. This effort contributed to the continuous improvement process forming part of the project's post-status supported internal quality framework. All project processes and deliverables, including management practices, quality control measures, and the team's adherence to the established quality standards were assessed to establish if the new business model met the quality criteria.

Stage: Reflection

- Reflection on the adoption of the newly designed work standards against the actual work practices of the Academy model and recommend further action

Reflecting on the adoption of the new operating model and work standards contrasted the work standards and the actual work practices, highlighting further improvements. Reflection was employed at various stages of the project and impacted communication, training and development opportunities, evaluation of work practices, focus groups and performance review meetings with employees. Reflecting on the adoption of newly designed work standards against actual work practices was critical in ensuring that the Academy was meeting its goals and objectives and ensuring that the work standards were sustainable.

- Reflection on my role in the project as an embedded researcher and practitioner

I consider my role as an embedded researcher and practitioner in this change project as a unique and valuable opportunity to gain both practical knowledge as well as research-based insights. The embedded role perspective provided me with an opportunity to learn more about the challenges of transformation projects. In this dual role it was essential to collaborate closely with all project stakeholders to ensure that research knowledge and idea generation were being put to good use. This aspect required effective communication, active listening, and the ability to engage the team to work collaboratively. As the project evolved over time, my embedded role required a higher degree of flexibility enabling me to address new challenges as they arose. The ability to adapt to the Academy's changing circumstances and adjust the approach accordingly was critical in this role. Ethical considerations as a researcher were always front of mind particularly when engaging the employees in a research setting. I made sure that confidentiality was respected at every stage of the project. The ultimate objective of taking up an embedded researcher and practitioner role was that to have a positive impact on the project and its outcomes. Combining research-based acumen with its practical application, made it possible to improve the outcomes of the project.

- Personal reflection as an Academy learning professional

Navigating through the various activities of this action research project contributed to my learning experience as the changeover progressed. Reflecting on the use of learning technologies, the creation of digital learning tools, noting the effect of team-based learning coupled with deepening understanding regarding quality benchmarks as a direct strategic advantage for the Academy, represented an opportunity for personal growth. Reflection was essential to allow me to adapt my

leadership approach, particularly my communication style, decision-making, and team guidance supporting a positive team culture. It was also critical to help me understand better my strengths and acknowledge areas where I could improve. The reflective approach helped me study the research question and objectives set for this project in depth, refining the research methodology, acknowledging the Academy's strengths and limitations, and ensuring alignment to the research objectives. self-aware trading challenges and setbacks as opportunities for learning. Through self-reflection was in a better position to examine my assumptions, control bias, and ethical considerations. The reflective process enabled me to understand and manage my emotions better addressing challenges with greater empathy and composure whilst adopting a growth mindset.

1.10 Project stakeholders

The implementation of this project brought together various stakeholders together in a collaborative environment. Identifying project stakeholders involved understanding the roles, perspectives, and power dynamics with the main objective of facilitating effective communication, collaboration, and decision-making. Recognising individual roles with significant influence and interest in this research project was essential for building a coalition of support and addressing potential challenges. As displayed in Figure 4 below, every stakeholder persona had diverse interests in the project particularly from the perspective of active project involvement and the importance that this project carried for them. In addition, Table 1 summarises the level of importance and involvement of all stakeholders through the stages of the project. The stakeholder listing classifies both primary and secondary ones based on the level of interaction of each entity. Primary stakeholders have a more direct and significant interest in this transformation project as they are affected directly by the changes, actions and decisions, and their involvement was necessary to ensure a successful project outcome.

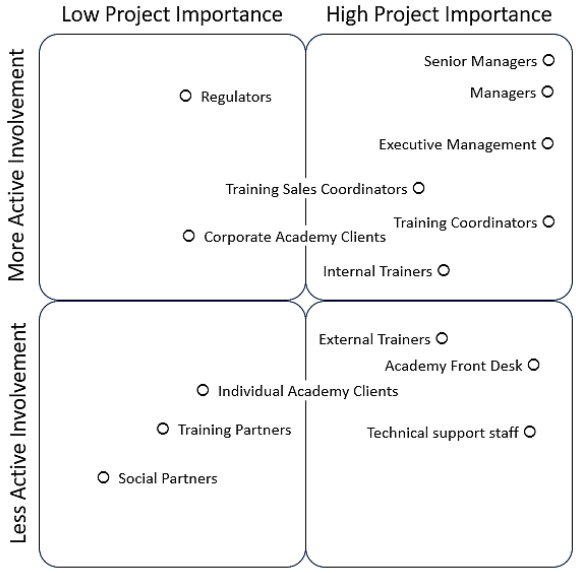

Figure 4 Stakeholder 'Active Involvement' vs 'Project Importance'

Stakeholders positioning was essential to this project as it enabled me to identify the unique contributions and concerns of different stakeholders, giving me a comprehensive understanding of the problems to be overcome and related potential solutions. Recognising shared goals and potential points of contention helped me develop a more effective communication and collaborative approach. This allowed me to proactively address concerns, provide information and engage in meaningful dialogues with all individuals, thereby reducing the likelihood of resistance to proposed change.

Stakeholders such as employees working for the Academy are directly impacted by the performance, policies, and decisions that the new business model introduced. The team members had a vested

interest in their job security, fair compensation, a positive work environment, and career development opportunities. This vested interested assumed added importance given that all these changes took place at a time of great uncertainty and major disruption.

Secondary stakeholders on the other hand have an indirect and less immediate interest in the Academy project. Such stakeholders like the national regulator for training institutions even though not directly impacted by day-to-day operations, their direction still impacted the Academy in a significant manner.

Stakeholders' Inventory	Diagnose	Design	Implement	Evaluate	Reflect
Primary Stakeholders					
Executive Management	☑	☑	☑	☑	☑
Senior Managers	☑	☑	☑	☑	☑
Managers	☑	☑	☑	☑	☑
Training Coordinators	☑	☑	☑	☑	☑
Front desk	☑	☑	☑	☑	☑
Technical support staff	☑	☑	☑	☑	☑
Training Sales Coordinator	☑	☑	☑	☑	☑
Internal Trainers	☑	☑	☑	☑	
External Trainers	☑	☑	☑	☑	
Individual Academy Clients	☑	☑		☑	
Corporate Academy Clients	☑	☑		☑	
Secondary Stakeholders					
Training Partners	☑	☑		☑	
Social Partners	☑	☑		☑	
Regulators	☑	☑		☑	

Table 1 - Stakeholders' involvement in the project

1.10.1 Involvement of Project Stakeholders

Stakeholder interaction in the context of this project built on an inclusive approach leveraging the collective expertise, knowledge and information of stakeholders. Starting off with primary stakeholders, the involvement of:

i) **executive management** received regular briefings on the progress of the new training model, often leading to in-depth discussions on the alignment of the model with firm's goals and budgetary considerations. Interactions took place during business meetings as well as thru one-to-one sessions.

ii) The next level of **senior managers** included both individual and collective update discussions on the impact of the digital model on work and productivity in the specific area of responsibility. More importantly the discussions explorer the benefits of the digital model to strengthen

corporate offerings from a learning and development perspective. Interactions took place regular mainly during project and Academy-led meetings.

iii) **managers** received training sessions on enhancement of their managing their respective teams and functions by providing a continuous learning environment for the firm's workforce. The interaction was iterative aimed at addressing managerial concerns immediately to sustain performance. In addition, the Academy conducted session**s** with managers supporting departmental goals with the new features and capabilities of the digital model.

iv) the **training** coordinators, as members of the Academy team, were involved continuously throughout the project. The training coordinators were key stakeholders supporting the design and implementation and of digital tools in training coordination tasks.

v) the **front desk** of the Academy, were involved in the customer experience, visualising how best to utilise the digital platform for client interaction. The engagement with the front desk included regular updates on changes in client communication channels and helping address client queries linked to the new training model.

vi) the **technical support staff** were an essential stakeholder in the project and consulted on all technical aspects of the digital training infrastructure. This stakeholder's. They were involved with real-time support across all channels plus addressing technical issues during training sessions. Their task included troubleshooting queries and issues linked to the operation of the new digital solutions leading to enhanced system reliability.

vii) the **training sales coordinator** role supported the articulation of the advantages of the digital model to existing or potential clients. They helped in designing marketing materials that highlighted the benefits of the new model. Trainers from the firm's technical function were an important stakeholder as they enabled Academy staff to in a better understanding of development opportunities related to digital training tools. **Regular feedback** and review e sessions were held with them to assess the effectiveness of the digital model.

viii) the academy makes use of a minimal number of **external trainers** in areas that go beyond the expertise held by the firm. Engaging with this cohort was part of the collaborative approach adopted by the project. Some were engaged to provide training in making use of the new digital platform and engagement included regular updates on changes in delivery expectations and synchronising programme delivery.

ix) **academy** trainees were clearly important throughout the term of the project. Their involvement and feedback were valuable contributions. As part of this project, individual trainees received orientation sessions enabling them to navigate efficiently the digital learning platform. Regular

feedback as part of every training session helped in finetuning the Academy service, capturing individual preferences and addressing common concerns.

x) **corporate clients** of the Academy**,** interacted on a different level compared to individual trainees. Most of the interaction involved training consultative sessions aimed to leverage the new training model with a client's corporate learning objectives. A dedicated account management approach facilitated customisation of training programs in order to maximise organisational benefit. These experiences enriched the potential of the new Academy model.

Secondary Stakeholders

xi) the **training partners**, providing specialist and certified content, were mainly involved in integrating third-party content seamlessly into the new digital model. Interaction with training partners related mostly to joint promotion whilst leveraging the advantages of the digital training model.

xii) the **social partners**, such as the national skills council or the eSkills foundation, were involved mostly on initiatives to extend training opportunities to meet the standards and needs of the communities they represent. Collaboration with respect to joint activities showcasing the societal benefits of digital education represented a positive spinoff from this project.

xiii) the **national regulator** required transparent communication of compliance with industry regulations. Biannual reviews to ensure alignment with regulatory standards represented an important end goal to this project. Given the term of the project, collaboration with the regulator was also relevant in considering the evolving regulatory frameworks for digital education.

1.10.2 Ethical considerations

During the implementation of the change project, ethical considerations were regarded as critical elements along the research process and a formal ethical approval was sought in preparation to this research (Appendix D - Research Ethics Application Approval). In my role as an action researcher, it was imperative to navigate the ethical challenge of prioritising open and timely communication, creating an environment of trust and addressing concerns to foster a collaborative approach to change. Miscommunication or a lack of clear information had the potential to generate anxiety and resistance among the team.

Listening to and supporting employees in an equitable manner also surfaced as a possible ethical consideration during the change project implementation. Striving for fairness and consistency in applying changes consistently across the Academy levels was essential. During the course of a 30-month project it was possible that instances of unintended bias or disparity could emerge, posing an ethical challenge related to fairness and equality. The nature of possible bias spans from feedback and input bias to performance evaluation bias. In my role, addressing and rectifying observed inequities became a priority, emphasising the commitment to treating all team members with dignity and respect. By actively monitoring and addressing potential biases, the ethical dimension of fairness was upheld, contributing to a positive organisational culture amid the transformative journey.

1.11 Project Challenges

The accelerated pace of change combined with the pandemic state, dramatically conditioned this project presenting positive aspects but also giving rise to unexpected pressures. The abrupt shocks in market forces mandated continuous adaptability as a key element for the Academy to secure its relevance in the training space. Few months into the project it was already evident that the principles that characterised the way learning was designed, developed and received had adapted to the new virtual context. The challenge at corporate firm level was to determine where best to focus the investment of time, finance and specialist effort, at a time when uncertainty, unplanned outcomes and increasing needs at various client organisations started to stretch resources within the firm.

The Academy's adaptation capability was crucial to implement the project successfully. The main challenge that emerged was the extent of the financial outlay that was to be made to transform and grow the Academy as a learning organisation that could operate an efficient model in today's digital market. The challenge at a personal level was that to change the operating methods used by the workforce, given that some members within the team had been operating the Academy's habitual model for more than eight years. More than lack of team cooperation, individual resistance was one of the aspects that needed clear attention.

This action research project challenged the traditional training principles that were predominantly used for the improvement of the training delivery. The research carried out at the Academy allowed individuals and the trainers' cohort to identify limitations and improve the learning experience of trainees. Changing practices started off with the need to change mindsets. A major challenge for this project was that of making training excellence a commonly practiced habit and acquiring the disposition to actively position the Academy as a leading training institution. Changing habits is a complex behavioural adaption that draws on ample time and effort. Habits have been characterised as rigid, automatic, unconscious, and opposed to goal-directed actions (Bernacer, J., & Murillo, J. I., 2014). The project considered different aspects of human behaviour and cognition where training habits are of great relevance to the new training model.

Another challenge of this action research project was to ensure complete objectivity when working with individuals and evaluating outcomes in my role as a practitioner. In my role as a researcher regularly working hand-in-hand with every individual, I wanted to ensure that colleagues and other participants on the project did not feel compelled into change but were willing and contributory participants in it. The challenge was both of an ethical and a responsibility nature. Confidence and trust helped every member in being true and honest in providing feedback and replying to

measurement surveys along the project. Furthermore, I made certain that my role as a practitioner would not preclude me from being open and critical of the firm's methods of practice.

1.11.1 Project engagement considerations

Designing this project taking an action research approach included also foreseeing potential common engagement problems and dealing with 'laggards' during a transformation project. It was recognised from the outset that individual roles or specific functions might resist the proposed change due to fear and uncertainty, favouring more the status quo. The situation brought about by the Global pandemic at the initial stages and within which context this project took place however, developed other and greater forms of hesitation - such as a sense of insecurity. This encouraged acceptance that the change project was welcome if not an absolute requirement. This element made COVID-19 a useful ally to this Project.

Notwithstanding the generally positive outlook towards the project by all stakeholders, aspects of uncertainty and fear still required addressing through continuous and proactive communication, involving all individuals in the decision-making process whilst providing clear reasons and benefits for the proposed changes. Additionally, the intensive training and support adopted help alleviate the fears and build confidence in the new approach. Although some Academy staff went through difficult times related to COVID issues, the support provided within the project led to minimal resistance to the change itself.

1.12 Research Limitations

In the course of conducting this research, I came across a number of limitations and disadvantages, some of which could have possibly led to the introduction of inherent bias. Some mitigating factors were applied in terms of the mixed-method research approach that was employed, however the nature of the project and the action research cycle itself presented a rather specific and distinctive context that could not be externalised outside the Academy and therefore could not be automatically extrapolated for community purposes. The sample sizes both for most qualitative and quantitative assessments were restricted to the Academy population. The same applies for observation and reflection activities. Working with smaller samples raises the risk of outlier data bias, where averages could hide and distort the true picture of data obtained.

Citing and referencing prior research studies within a similar context was also difficult due to the particular setting of the Academy. It was not possible to find any prior comparative research study of an institution or academy that would share the similar scope and objectives as this project. Another limitation related to the pandemic spread that created various industry biases, some of which could be permanent due to community and market elasticity adjustment, whilst some others could possibly disappear should the pandemic become endemic.

Effort was made to neutralise the bias towards data and results that would support the transformation project or related evaluation, ensuring that all the data-gathering process was carried out appropriately. Potential bias was partly mitigated by looking at alternative interpretations of data through reflection or by reviewing outcomes and finding with team members. This open approach helped also minimise cognitive biases when analysing data linked previous professional and personal experiences, that could lead to distortions or wrong assessment when making decisions.

1.13 The Thesis Structure

The thesis structure is spread over nine chapters. This introductory chapter outlines the structure and timeline of the research, identifies key stakeholders, and acknowledges project challenges and research limitations.

This is followed by an in-depth exploration of the theoretical foundations that underpin the research project. This second chapter navigates through the literature concerning organisational change, the process of managing change, knowledge management, learning theories, the impact of technology, team learning, motivation to learn, learning design, and the evaluation of learning success. The literature review finishes with an analysis of gaps in existing literature related to digitalised learning, setting the stage for the research's contributions.

The third chapter outlines the research methodology including the philosophical underpinnings of the study, addressing ontological, epistemological, and methodological considerations, particularly within the framework of action research. This chapter emphasises the researcher role as an embedded practitioner and details the research planning process. The adoption of action research methodology and the strategic integration of technology as an enabler are highlighted, providing a roadmap for the subsequent stages in the following chapters.

The following three chapters describe each stage of the action research approach and outline the activities undertaken at each stage. The extensive problem diagnosis in chapter four leads into the design of the project, informed by the knowledge gained and theoretical background from chapter two.

The fifth chapter moves to the practical execution of the project, which was managed in five phases, between mid-2020 and mid-2021. Evaluation of success was not a distinct chronological phase as it was ongoing, but the methods used and results are covered in chapter six.

The seventh chapter undertakes a comprehensive analysis of both Organisational Research Objectives (OROs) and Academic Research Questions (AROs). It delves into the findings, drawing meaningful conclusions and offering insightful recommendations for future research initiatives. The chapter culminates in practical recommendations tailored for learning organisations undergoing similar digital transformations.

Chapter eight takes a reflective exploration of the researcher's role as an embedded project leader and researcher. This chapter presents elements of self-reflection on the dual responsibilities, shedding light on the challenges faced and lessons learned throughout the transformative journey. Reflection-

in-action provides real-time insights into the evolving dynamics of the project, capturing the key observations. The chapter also reflects on each project stage and the interventions made, with the benefits of hindsight. It finally summarises the unexpected impact of the global pandemic and unanticipated insights derived from the project.

The final chapter provides a comprehensive summary of the project and its methodology. It serves as a synthesis of the whole journey, offering insights into the transformative impact on the Academy's training model. It concludes with a forward-looking perspective, acknowledging the project's contribution to the broader landscape of digital transformation in learning organizations.

The References and Bibliography section is organised by subject and four Appendices provide some additional background to the project.

CHAPTER 2 - Literature Review and Theoretical Background

2.1 Introduction

The only aspect that is constant in training and learning is change. Decoding the elements that contribute to a managed changeover at every stage was central to this project. The review of the various sources of existing knowledge provided fundamental insight accompanying the PwC's Academy transformation. The review draws on a series of consulted sources employing a thematic approach. The themes focus on organisational change, cultural change, knowledge management, how people learn, impact of technology, team learning, motivation to learn, learning design as well as evaluation of learning success.

The literature review was central in helping me understand better different perspectives, challenges and considerations brought about by a fast-evolving learning and training paradigm. Researching through the collection of works and the insight each provide, increased my interest to search for more information and dig deeper. Various authors contributing to the subject areas pertinent to this transformation project present notions, models and positions that this action-based research sought to relate to, interpret and evaluate. This approach enabled me to investigate further where the discovery as part of this research diverged from the source findings or conclusions and improve project outcomes.

2.2 Organisational change

Organisational change theory has evolved over the years with several reference models receiving more application than others in organisational development. As argued by Waddell et al. (2019), such change frameworks describe the key activities that need to take place in order for organisations to initiate and carry out successful organisational change. Development and transformation affect all aspects of an organisation with change creating ripples and consequences across all functions. Dawson (2000) claims that organisational development revolves around the ongoing development of dynamic knowledge capabilities. Such organisational capability is what provides the potential to process changing information rapidly enabling the organisation to adapt to its business environment. In addition, Dawson (2000) suggests that these organisational development capabilities can be classified in four domains namely, individual technology, organisational technology, individual skills and behaviours, and organisational skills and behaviours.

In his work "Action Research and Minority Problems," Kurt Lewin (1946) highlighted the significance of group dynamics in promoting intergroup understanding as a means of addressing social issues experienced by minority groups. He argued that studying the dynamics of group interaction can be helpful in finding ways to reduce prejudice and discrimination. By bringing people from different backgrounds and perspectives together, understanding can be promoted, and social issues can be addressed in a more inclusive and collaborative way. Lewin's work emphasises the importance of considering group dynamics in addressing social issues and promoting positive change.

Lewin's research on action research and group minorities highlights different stages of group development, in promoting effective teamwork and addressing social issues. His research on group dynamics identified three stages that groups typically go through when working together, referred to as forming, storming, and norming. Throughout the forming stage, group members are typically polite and tentative in their interactions as they get to know one other and establish initial impressions. In the storming stage, conflicts and tensions arise as members establish their roles and opinions. This stage can be challenging for the group as it works to establish a sense of direction and leadership. Lewin believed that it is during the storming stage that intergroup conflicts can arise, as individuals may hold onto biases and prejudices that prevent them from fully engaging with other members of the group. He argued that by understanding these dynamics, researchers could design interventions that would help groups move from the storming stage to the norming stage, where intergroup understanding and cooperation are more likely. In the norming stage, the group develops a sense of

cohesion and shared norms and values. Members begin to work together more effectively and establish clearer communication and collaboration strategies.

One example of an intervention that Lewin proposed was the use of "contact theory," which involves bringing members of different groups together in a cooperative context. By working together towards a common goal, members of different groups can develop positive attitudes towards each other and reduce prejudice and discrimination. Lewin believed that this approach could be effective in promoting intergroup understanding and reducing social tensions.

Overall, Lewin's emphasis on group dynamics and intergroup understanding reflected his belief that social change requires a deep understanding of the complex ways in which individuals and groups do interact. By using this understanding to design interventions that promote cooperation and understanding, Lewin claims that researchers can contribute to create a more just and equitable society.

As presented by Burnes (2020) Lewin's model also considers that for organisational change to secure permanency, it is not sufficient to define the outcomes of a planned change, but the new level or the desired state need to be an integral part of the final objective. As highlighted in Figure 5, the stages of change as part of Lewin's approach are referred to as, unfreezing, moving, freezing model. At the foundation of Lewin's change management model theory is his firm belief that within any given change situation one cannot evaluate isolated elements without considering the situation holistically. The model emphasises the psychological transitions individuals undergo during a change process, from 'unfreezing' where the organisation prepares to accept change by challenging the current status quo, to 'freezing' by solidifying the new practices to ensure their longevity and prevent a return to old habits. The transitional 'movement' represents the implementation of the desired change, involving the adoption of new processes and behaviours.

Figure 5 - Lewin's three stage model

Prof. John P. Kotter's 8-step change model, introduced in 1996, stands out as one of the models that presents a structured and sequential approach for implementing organisational change. This eight-step model encompasses stages from the "creation of need for a project" up to "process embedding stage" (refer to Table 2).

1	Establish a Sense of Urgency	Recognise and communicate the need for change.
2	Create a Guiding Coalition	Identify a group with the power and energy to lead and support a collaborative change effort.
3	Develop a Vision and Strategy	Create a clear vision and related strategy for achieving that vision.
4	Communicate the Change Vision	Ensure that as many as possible understand and accept the vision and the strategy.
5	Empower Employees for Broad-Based Action	Remove obstacles to change, change systems or structures that weaken the vision, and encourage risk-taking and nontraditional ideas, activities, and actions.
6	Generate Short-Term Wins	Plan for and create visible performance improvements or 'wins'.
7	Consolidate Gains and Produce More Change	Sustain early wins to change systems, structures, and policies that don't align with the vision. Promote and develop employees who can implement the vision.
8	Anchor New Approaches in the Culture	Reinforce the changes by demonstrating the relationship between new behaviours and organisational success.

Table 2 John Kotter's 8 stage model

The model is broadly applicable across numerous industries and contexts. This being established however, as argued by S.H. Appelbaum et al (2012), the model has best use as an implementation planning tool, and complementary tools should also be used during the implementation process to adapt to contextual factors or obstacles. In today's dynamic world, organisational leaders must be vigilant about the context in which their organisations are situated, being particularly attentive to changes in the general and task environments (Armenakis, A., & Harris, S., 2009). These authors claim that, in order for an organisation to survive change and prosper, it must be knowledgeable about '*how*' to implement '*appropriate*' organisational changes that will need to be embraced by its employees.

Towards the end of an organisational change process, the consolidation of improvements requires ongoing iterative change. Thus, in the context of an agile and fast-moving training industry, the institutionalisation part of John P. Kotter's (2012) model is likely the most contentious point for consideration. In order to operate as a licenced organisation, it is necessary for the Academy to establish and define standards; however, as stated by Fink (2010), making the appropriate connections between accepted new behaviours and success requires consistent leadership that can build an ongoing and renewed process over time.

Organisational change is heavily reliant on organisational culture and its adaptability. Gerstner L.V. (2002), Chairman and CEO of IBM, largely credited with turning around IBM's fortunes during his tenure at the firm, stated that 'culture isn't just one aspect of the game—it is the game'. In the end, an organisation is nothing more than the collective capacity of its people to create value. The implication is that unless culture at a minimum is seen as an integral part of change, there is a reasonable prospect that a change project could fail. The recognition of the employees' individual agent capability as opposed to the organisational agent power of the Academy is a way to transform culture from an imposed to a negotiated setting. (Campbell C., 2009). This encourages an environment

in which managers and employees can co-produce meaning, transforming the “received practice” activity into a “negotiated” one (Breuer Boucher J., McDermott J. H., 2010).

As affirmed by Willmott H. (1993), just as organisations’ use of corporate culture as “soft” controls may be hidden from the team, it is expected that the employees' epistemic interpretations and assessments may be hidden from managers, thereby preventing the Academy’s learning opportunities as an organisation to profit the employees' “knowledgeability”. Directing oneself by a stronger sense of self, which includes the negotiation of the evolving identity in terms of role and function as each team member engages in new work practices (Billett S., 2007). It is understood that the processes of learning and the redesigning of the work practice, require a superior acknowledgement of individuals' sense of self need and recognition. Change projects need to consider how to mobilise growth through individual learning and not assume that setting organisational goals beyond the individual will be sufficient (Reynolds T. et al, 2006). Organisational change is also highly dependent of effective leadership and change management oversight. This will be explored further in the following subsection.

Transformational and transactional leadership

Leadership is fundamental to any change management process given that change entails creating a new system which would subsequently be institutionalising the new approach (Eisenbach, Watson & Pillai, 1999. James McGregor Burns (1978) developed the concepts of transformational and transactional leadership linking it fundamentally to the political setting, however this leadership notion was further developed by Bass (1985) who refined further the concept linked to the organisational context. As claimed by Bass & Riggio (2010), project transformation leads to significant change in the everyday life of individuals and organisations. Change remodels the perceptions and values of the organisation, and changes also the prospects and aspirations of employees (Bass et al. 2003).

In contrast to the transactional approach, a transformational approach is not based on a leader-subordinate relationship where the leader rewards subordinates on the basis of positive performance, but more on the leader’s ability to develop a robust vision and lead by example (Lia. 2011). Barbuto (1997) adds that transformational leaders rise above transactional leadership and identify ways of motivating individuals and groups to identify with them and their vision and give up their personal interests for that of the group. Charismatic and visionary leaders can effectively introduce change by displaying the right qualities at the right moments of the transformation process. When there is a

realisation that the old ways no longer work, such leaders may undertake the task of developing an appealing vision of the future (Eisenbach, 1999). Changing organisational behaviours is a key aspect of organisation change, as explored further in the upcoming subsection.

Espoused and On-the-job Behaviours

Tagg (2010) claims individuals employed at organisations are often engaging with one of two main paradigms of action. These are "espoused theories" and "theories-in-use". Espoused theories deal with consciously held principles that individuals use to articulate, defend, or foretell actions. Observing closely employees on the job however, the processes in reality often do not follow the shared espoused theories. Employees do not always follow processes in line with what they state they should. It can be observed that the behaviour is not random and follows a coherent pattern (Argyris, 1982). The employee behaviour follows routine processes with a regular expected outcome, that can also be referred to as a theory-in-use. Whereas espoused theories are methods that employees deliberately accept and usually believe in, such approach does not control behaviour. Argyris (1982) argues that theories-in-use do not actually govern over behaviour in a formal way, but employees follow these practices very often unconsciously. Exploring the content in the subsequent subsection provides insights into organisational learning through these behavioural considerations.

Single and Double Loop Organisational Learning

Argyris (2004) describes "single-loop learning" as referring to actions where employees act with a purpose, and change is based on the feedback received from the system indicating whether the purpose has been addressed. It is typical that employees learn to adjust the actions directly in response to the feedback received. Often, single-loop learning is sufficient to meet the most common adjustment and leads to first-order change and innovation. Should however an employee come across a situation where circumstances change and new elements are introduced, a single-loop learning approach might not address the concern. "Double-loop learning" on the other hand, is often linked to second-order type of change and transformation. Double-loop learning can lead from a paradigm shift to a change in established values and practices that characterise the organisation (Barr and Tagg, 1995). A growing number of recent research on organisational change indicate that individuals are becoming increasingly concerned with the tempo of change, which can also be defined as the rate of change or pattern of labour or activity in an organisation. Weick & Quinn (1999) claim that episodic change is contrasted with continuous change based on suggested metaphors of analytic frameworks, ideal organisations, intervention theories, and roles for change agents. "Unfreeze"-"transition"-"refreeze" is the sequence that characterises continuous change. The choice between viewing change

as episodic or continuous is assumed to be influenced by one's understanding of inertia and its various forms.

Alban (1987) describes a variety of advantages that can be gained through creating a clear change outline. As a first, it serves as a motivating force for management in the definition of a future state, with the process motivation and positive tension acting as a catalyst to kick-start the transformation. By contrast, a focus on the flawed current condition tends to exaggerate bad events and the potential of failure, resulting in a pessimistic frame of reference. Secondly, the specific behaviour outlined in the description of the future state allows individuals within an organisation to better understand and visualise their own role and contribution, which in turn improves team cooperation and contribution, thereby assisting in the reduction of resistance to change. Thirdly, the process of outlining a specific future in detail identifies the nature of the anticipated change and so enables management activities to be taken to promote that transformation. Fourth, it shifts management's attention away from the tendency to tackle current symptoms in a problem-solving mentality and toward outlining what is required to make the organisation more effective (Alban B., 1987). Although the term "vision" is becoming more commonplace in contemporary management jargon. Beckhard and Harris highlight the fact that stating the vision on its own will not inspire the kind of organisational energy that will lead to the change. Neither will elaborating on the primary purpose alone. In addition to elaborating the vision, which is typically vague, and elaborating the mission which can also be very broad, it is necessary to define a midpoint objective that helps establish a stronger project focus (Beckhard and Harris, 1977). This leads on to the next subsection about the need for organisations to outline a clear vision.

Defining a clear vision

In Professor J. Kotter's third stage of 8-step change model, "Developing a vision and strategy," the focus shifts onto the creation of a clear and inspiring vision for the desired future state of the organisation. He goes on to elaborate on the need of formulating a comprehensive strategy to achieve such vision. Kotter claims that planning a vision involves envisioning what the organisation should look like once the desired changes have been implemented. It goes beyond simply identifying the problems with the current state and instead defines a new outline that reflects a better sustainable future. A well-articulated vision brings together the organisation's core values, purpose, and future goals. The vision acts as a marker that aligns employees at all levels towards a common objective.

According to Bridges (1996), the workforce continues to evolve and change. People from a wide range of ethnic and religious backgrounds are increasingly entering the workforce, resulting in a more

diverse and inclusive workplace across a wide range of industry sectors. According to the World Economic Forum (WEF) in their "Global Gender Gap Report" that assesses gender disparities in various aspects of society, including economic participation and opportunity establish that there are increasingly more women in leadership positions, more variety of generations, and more employees who work from home or from other remote locations than ever before. Individuals must be given the freedom to think for themselves, to work both independently and cooperatively with greater flexibility, to be innovative and risk-taking, and to go the extra mile in order to get the greatest potential results. The following subsection looks into the forces supporting and resisting the change outlined as part of the defined vision.

Resistance to change

Through his Force Field Analysis model Lewin (1946) claims that in a normal setting an organisation operates and maintains an equilibrium between forces that reinforce change and other forces that resist change. As shown in Figure 6, Lewin's model maintains that, for change to take place, the forces driving the change forward must be strengthened or the resisting forces reduced. This model is valuable for analysing which forces are sustaining and hindering the change process.

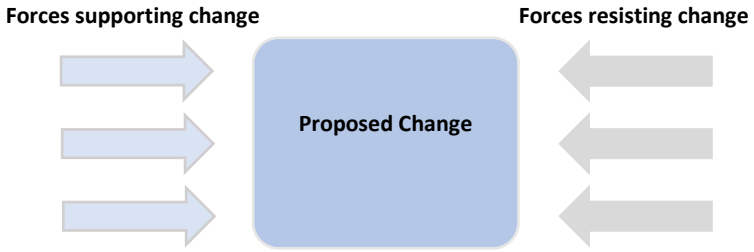

Figure 6 - Force Field Analysis model

Change management is the process that, acknowledges the need and demand for change, describes the ideal future state, defines the current condition, and manages the transition from now going forward. Beckhard and Harris (1977) build on earlier research by exploring the concept of transition management while also introducing the need for an outline of the intended future state. They discuss some of the most essential reasons why it is critical to articulate a vision for the future sufficiently early in any change project. A clear and precise blueprint of what the future organisation should look like is produced as a result of articulating a specific vision in the context of difficult transition. This is a critical step in developing a strategy for long-term transformation. In addition, Beckhard and Harris (1997) state that, the single greatest barrier to successful change is a failure to devote sufficient time and attention to defining the end state sufficiently early on. Their acknowledged "Change Equation" (refer to Figure 7) highlights the importance of creating a strong foundation for change by addressing

any employee dissatisfaction, establishing a compelling vision, taking meaningful first steps, and actively managing natural resistance. The model suggests that when these elements are balanced and aligned, the positive momentum for change should outweigh the resistance, increasing the likelihood of project success.

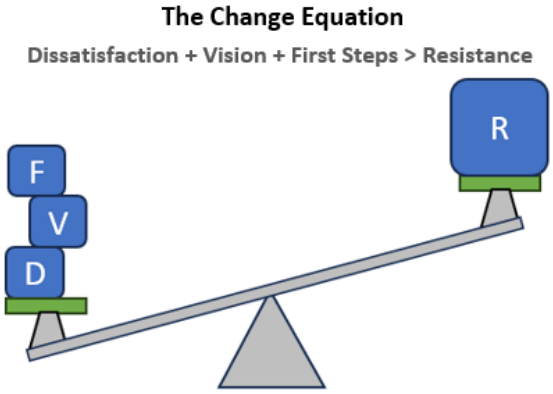

Figure 7 - Managing change model (Beckhard & Harris 1987)

As presented in the "Change Equation" by Beckhard and Harris (1987) on organisational transitions and managing complex change, dissatisfaction alone is not sufficient to bring change (Figure 7). Dissatisfaction needs to be coupled with a clear vision of the desired future state supported by a number of practical steps to realise that vision. They maintain that resistance is a natural and expected part of the change process and therefore organisations need to proactively address and mitigate resistance to increase the chances of successful implementation. Their acclaimed change formula considers the readiness and potential effectiveness of the change initiatives. Evaluating the levels of dissatisfaction, the clarity of the vision, and the feasibility of the initial actions helps identifying the areas that require most attention and adjustment to enhance the overall change process and a deeper understanding of the dynamics involved in driving successful change. The following subsection looks more closely at the individual transitions as part of the planned change.

Individual transitions as part of change

The efficacy and efficiency of transition management strategies have been consistently demonstrated, instilling confidence in understanding and navigating the complex shifts that organisations and the individuals within them, undergo. Transition strategies provide reassurance that allows organisations to grasp the known aspects of these changes while confronting the uncertainties, enabling us to chart a course through the ongoing transformations. Bridges (1999) asserts that there is a well-established mode of shifting an organisation from one stage to the next. In the first place, one must understand that convincing people to quit doing things the old way and start doing them the new way is essential

to attaining the results one seeks. Because people have a personal connection to the way they operate, it is just impossible to do it in an impersonal manner. Secondly, transition management is built on some qualities one already possesses as well as other approaches that are rather simple to learn and apply. If well managed, it is not an undertaking that will cause the individuals involved with major disruption and is a method of dealing with others that enables everyone involved to feel more comfortable with themselves.

The topic of organisational and individual changes and why they don't always occur as intended, despite appearing logical and sensible, has been extensively discussed and debated. We have learned through experience, argues Bridges (1996), how counterproductive it may be to try to overcome people's aversion to change without also addressing their fear of the harm that change poses to their world. Practicing transition management skills allows individuals to tap into intrinsic knowledge that one would have developed over time, as well as provide tools and strategies for learning new ways of doing things. Having this understanding will allow managers to lead with confidence, communicate clearly, and ensure their respective team are on the right track. The message that we've been here before can provide consolation to those who hear it.

Hlupic (2021) claims that individuals want to be able to adjust to ongoing changes that we have all had to deal with, and maintaining a healthy level of well-being for themselves and their families is extremely essential to them. In addition, employees want to work for organisations that have leaders and managers that care for their wellbeing. Individuals also want the opportunity to spend some quality time with their family members and people close to them. As change leaders attempt to adapt to the realities of this new world, they are confronted with a number of challenging situations. In a context of a rapidly changing environment, leaders plan a change project then need to be able to move their organisations from an initial concept to full-scale implementation, often with restricted time for employees to become comfortable to the new way of working. This presents a significant challenge to all managers and leaders. As a result of this, leaders are often plagued by a sense of economic uncertainty, which is tough to shake off. In times of an uncertain economic climate, employees can get concerned about their financial future and tend to speculate how long an unstable economic situation can last, what is likely to take place in the near future, and whether or not they will outlive uncertain moments (Hlupic, 2021).

According to Bridges and Mitchell (2017), transition management is not a simple undertaking, however it is possible to achieve success if well designed. More important than converging efforts exclusively around the changes themselves, it is critical to understand how the team and individual

personnel will transition. Those two things are not the same thing. Project linked to changing circumstances such as relocating offices, restructuring team responsibilities, or deploying a new technology-based solution are all examples of situational change. The psychological aspect of transition, on the other hand, is well-documented. A three-phase process may be envisioned in which people go through as they integrate and come to terms with the specifics of the new circumstance that has been brought about by the transition. It is critical to successfully transition individuals through the change process if the change is to move forward as intended. When a change occurs without the engaging participation of all participants, it is equivalent to a rearrangement of desks in the room. According to Bridges and Mitchell (2017), this is what people mean when they say things like "Just because everything has changed, doesn't mean anything has changed around here". It is precisely such feedback from the individuals involved in the change that fail change projects.

Individual and team transitions follows three states as depicted in Figure 8 below.

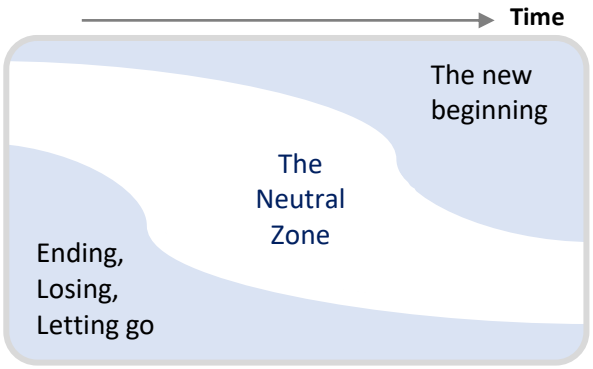

Figure 8 - Three states of transition

An overview of the transition's various stages is shown in the sections to follow:

- Ending, losing and letting go

The beginning of a transition starts with an end. Notwithstanding it sounds like a paradox, it is when individuals realise what they are losing and learn how to manage such loss, that they enter the first phase of the transition process. Every individual must come to terms with what is over and what will be left behind, as well as what they will keep. Relationships, processes, team members, and places are examples of such elements indicating that this is stage where individuals might need support to move forward.

- Neutral zone

The second phase in the transition process is to enter the neutral zone. Individuals go through a period of transition when the previous setting is left behind but the new has not yet been fully implemented.

It is at this period that the most significant psychological realignment takes place. In fact, this stage represents the very core of the entire change process. This is the period of transition between the previous reality and the new one. Individuals use this stage to develop new processes and figure out what their new duties will be. It is often that individuals find themselves in a state of flux and may experience feelings of perplexity and anguish. The neutral zone serves as a breeding ground for new beginnings.

- New beginnings

Beginnings entail the development of new perspectives, values, and attitudes. When anything new begins, it is marked by an outpouring of energy in an unexpected direction; it is the expression of an entirely new identity. The ability to construct new roles with an awareness of their purpose, the function they play, and the best ways to contribute and participate allows people to move into new roles more quickly and successfully. As a result, they have a revitalised sense of purpose and energy.

To conclude, as suggested by Bridges and Mitchell (2017), it is possible to assert that transition begins with an ending and closes with a beginning for the simple reason that it is a process by which people disconnect from one reality in order to plug into another. We now need to look into literature that focuses ono the process of *managing* change within organisations.

2.3 The Process of Managing Change

As previously mentioned in this narrative, J.P. Kotter's (2012) eight-staged model (refer to Table 3) served as a reference framework for this transformation effort when gauging management's perspective. Kotter's 1st step is "creating a sense of urgency". According to the article "How to create a sense of urgency without stressing out your team", however, this can be a significant difficulty, particularly if the urgency translates into team anxiety (Overby, 2019). In fact, when an attempt to raise urgency results in an increase in concern, it is possible to experience a negative impact around the change situation. This is a significant difficulty because, if the sense of urgency is misconstrued and met with signs of panic, good employees may also begin seeking for alternative employment opportunities (Kohli R., Melville N., 2019). Building a sense of urgency, according to Buchanan and Huczynski A.A. (2019), will trigger individuals with a higher need for achievement, who will tend to perform better when working against the clock and forced to engage with tasks in which they must achieve a standard of excellence rather than simply carrying out routine activities. A positive sense of urgency creates the right atmosphere for making change a central issue for managers concerned with organisational performance, adaptability, and survival, as well as for individuals concerned with their employability, their jobs, and their careers, according to the World Economic Forum (Buchanan, Huczynski, 2019).

Cameron and Green (2009) argue that the eight-step process outlined by John P. Kotter (2012) enables firstly the development of a genuine and trusted capability for addressing strategic change by providing a well-structured and transparent framework, while also involving volunteers in defining the strategy. Secondly, it distinguishes between the more mechanical aspects of day-to-day organisational performance management and the more innovative, future-oriented, and radical approaches that are often necessary to maintain competitiveness (Cameron & Green, 2009).

Organisations such as the PwC's Academy are part of a larger system of interconnected functions. IN such a setting a collective problem-solving is needed to achieve a variety of common objectives (Rogers, 1995). Digital marketplaces have changed the way systems interact within an organisation, however, in itself such change represents an opportunity that must be foreseen, prepared for, and handled effectively (European Commission, 1998). 'Leading with Purpose: The New Corporate Realities' by Ellsworth (2002) states that everything flows from a purpose that is centred around clients. The ultimate endpoint for company visions, missions, and strategies is defined by a concentrated emphasis on servicing the needs of customers. Ultimately, all strategic direction stems from a clearly understood answer to the question of why organisations exist. An organisation's

ultimate goal is to develop a plan that not only gives strategic direction with a clear purpose, but also to create a meaningful working environment for its people (Ellsworth, 2002). Furthermore, as emphasised by Appelbaum et al (2012), effectively managing the urgency aspect at the start of the project is critical to demonstrating the attractiveness of the change, presenting employees with clear expectations, demonstrating that it is possible to implement the change, and developing a positive attitude toward the change overall.

The work of Caldwell and O'Reilly (2003) sustains that successful change management involves not only focusing on the structural aspects but also nurturing the human element of the process. By recognising the unique needs and experiences of individuals and providing the necessary support, organisations can help individuals cope with change more effectively. This, in turn, contributes to smoother transitions, increased engagement, and improve the overall organisational performance. In their work, Priest and Jenkins (2019) highlight the significance of reevaluating the trainer's role in the context of leadership education and its impact on shaping a new vision for an institution. They argue that in order to effectively educate and develop leaders, it is necessary to understand and address the multifaceted aspects of the trainer's involvement.

Cowley and Domb (1997) suggest in their publication that, in addition to strategic vision, organisational objectives need to be developed in order to drive the change effort in accordance with the goals of the organisation while acknowledging the contributions of each individual employee. The vision chosen should aim to reduce the amount of energy lost as a result of continuous change in direction that often is associated ineffective communication. According to Cartwright and Baldwin (2011), achieving predicted new behaviours is heavily reliant on a vision that is properly conveyed to all parties involved. In order to ensure that the appropriate communication channels are formed with the team, but more importantly with the entire organisation, it is necessary to develop a communication plan that is in alignment with the vision. According to Kayes and Burnett (2006) organisations need to emphasise the importance of incorporating new inputs and suggestions from every team member as part of a coordinated learning journey. They argue that organisations should nurture a culture that encourages collaboration, active participation, and knowledge sharing among employees. By empowering team members to contribute their ideas and perspectives, organisations can tap into a broader pool of insights and experiences. This collaborative approach not only generates innovative solutions but also increases employee engagement, ownership, and commitment to organisational goals.

It is necessary for organisations to empower all members of the team by providing them with continuous reinforcement. Quick and short-term victories are critical to maintain project momentum. Sharing and celebrating project improvements and design the appropriate methods to recognise and reward individuals for their contributions to the team and business improvements in line with their jobs is fundamental (Jerry McAdams, 1996). To succeed in implementing transformation projects, it is critical to keep the change process going and to consider new ideas and resources on a regular basis. In their reference to the top concepts, methods, and approaches that assist in making sense of the change management process, Cameron and Green (2009) make a compelling case for sustaining such a flow of information. The project is about changing the mode of training delivery and so we will move onto the management of knowledge and of learning.

2.4 Knowledge management

In recent decades, economies have experienced a significant transformation, shifting away from traditional industrial economies and transitioning towards being knowledge-based. As claimed by Peter Drucker (1993) the transition from an industrial economy to a knowledge-based economy represents a fundamental change in the way economic value is generated. In an industrial economy, the focus is primarily on manufacturing and production processes, with physical goods being the primary source of economic output. However, in a knowledge-based economy, the emphasis shifts to the creation, dissemination, and application of knowledge and information. Schwartz and Bransford (1998), claim that there is a lot of evidence that suggests that learning is improved when trainers pay attention to the prior information and beliefs that learners bring with them to a learning task, and when trainers use such knowledge as a starting point for new instruction, while also monitoring trainees' changing conceptions as instruction proceeds. Yet another focus within the context of this study is the knowledge management and organisational learning aspects of the team's work.

“Knowledge Management” is a term that has different meanings to different people. It is closely associated with the concept of a Learning Organisation (Senge, 1990), being focused on how an organisation manages knowledge rather than individuals. Elmore et. Al. (1996) claim that the new science of learning has evolved gradually to provide knowledge that can significantly improve people's abilities to become active learners who seek to understand complex subject matter and are better prepared to transfer what they have learned to new problems and settings. This is a significant advancement from where learning was just a few decades ago whilst the world moves deeper into an increasingly knowledge-driven economy.

As claimed by Stevens (1996) knowledge is increasingly acknowledged as the primary factor in both productivity and economic growth, which has resulted in a shift in emphasis toward the roles that information, technology, and training play in terms of economic performance. In addition to this, it has resulted in requests for a greater emphasis to be placed on research and innovation, as well as personal development and flexible work patterns. The field of knowledge management, according to Senge (2006), emerges around the main parts or disciplines that are necessary to turn organisations into their generative forward-looking states, thereby assisting the team to reinvent itself over time based on its inherent strengths (Figure 9). According to Hislop et al. (2018), the strategies pursued by organisations, the characteristics of the organisation itself, and the business environment in which it operates all play a role in determining the suitable approaches for managing knowledge and addressing knowledge-related challenges. In other words, the nature of the business environment

impacts not only the types of knowledge-related challenges but also the appropriate approaches to managing those challenges for different firms.

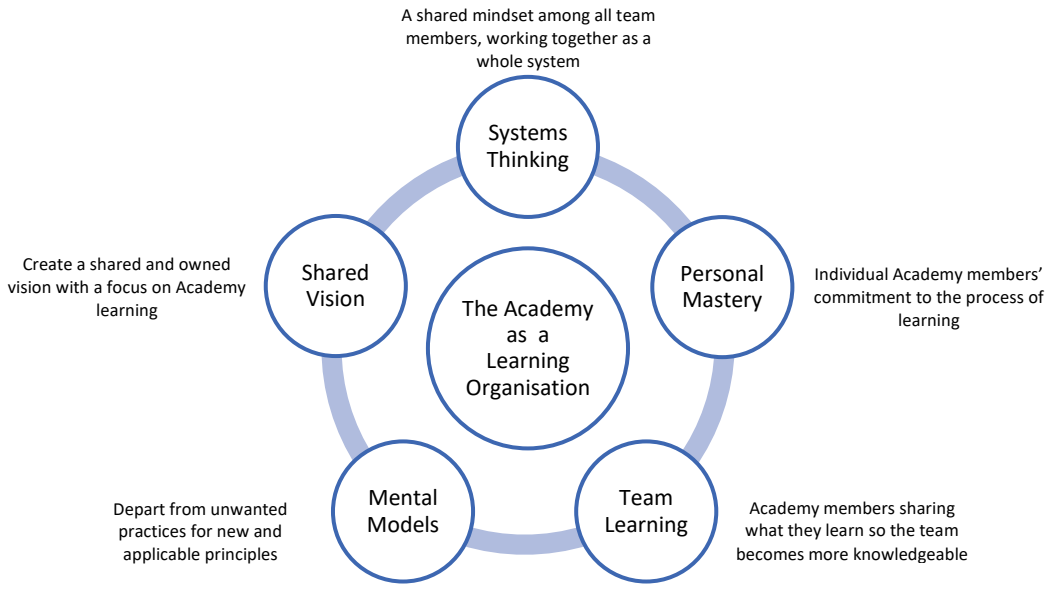

Figure 9 The Academy: Evolving into a learning organisation

(Adapted from Peter Senge 'The 5 disciplines of a learning organisation' (1990)

Martensson (2002) asserts that the effective management of knowledge and learning serves as a strategic tool essential for both organisational survival and gaining a competitive advantage. In order to ensure long-term viability and a competitive edge, organisations must actively develop such tools. This involves not only focusing on organisational transformation and knowledge management but also considering various factors that contribute to managing, building, and developing the intellectual resources of teams. Furthermore, it is crucial to maximise the utilisation of these resources to their fullest potential. A concentration on knowledge competences contribute to more efficient methods of scaling the creation, adaption, and application of knowledge itself (Van Buren, 1999).

In the context of a modern, information-based economy, Le and Lei (2018) argue that knowledge management should be regarded as a critical strategic resource for enhancing organisational competitiveness and ensuring long-term viability of the organisation. According to Sedighi et al. (2018), knowledge plays a crucial role as a valuable resource in the transformation efforts of a team. It serves as a catalyst for driving substantial changes in the design and implementation of an organisation's competitive model, ultimately aiming to attain long-term sustainable economic value and market distinctiveness.

Looking at the global landscape, advancements in the digitally driven knowledge-based learning industry are supporting organisations in enhancing their capability to rapidly generate, distribute, and utilise information compared to their main competitors in an intensively competitive environment (Koohang et al., 2017). The agility of organisations operating in the knowledge market stands as a vital element that institutions like the Academy must effectively oversee and manage.

Xiao, Zhang, and Ordóez de Pablos (2017) claim that modern organisations have shifted their focus from tangible asset creation to the development of intangible resources by developing effective knowledge sharing among employees. This collaborative approach promotes organisational creativity and innovation. When faced with challenges or opportunities, knowledge acquired through experiential learning becomes valuable in the decision-making process, particularly in situations where obtaining information from external sources is challenging. Additionally, the research by Morgan et al. (2003) suggests that both general and specific market-related information influence the relationship between target market choices and business performance.

Dixon N. (2022) suggests that the management of learning within organisations can occur in three distinct contexts, one of which can even happen informally within proximity, such as across the hallway. In the first scenario, individuals rely on their past experiences and training to generate personal meaning and knowledge. However, this knowledge remains primarily confined to the individual unless it is shared with others. Without sharing this individual information, the organisation cannot effectively learn and grow. Dixon (2002) further explains that the second type of communication arises when individuals share their personal meaning with colleagues within the same organisation. This type of interaction develops important exchanges and allows ideas to be challenged and debated among participants. Lastly, the term also encompasses the collective meaning that unifies organisational members and enables them to collaborate closely in achieving shared goals. This third context cultivates a stronger sense of belonging and community, facilitating consensus-building without the need for lengthy and complex discussions, thereby allowing the organisation to allocate resources more efficiently to pressing matters. However, one potential drawback of collective learning is that group knowledge, which may have been beneficial at one point, can become outdated, and adapting team learning and experiences can be challenging.

According to Blackler (1995), there has been an increasing recognition of the significance of investing in knowledge workers, organisational capabilities, and knowledge-intensive environments, which can offer a competitive edge to organisations. However, it is important to acknowledge that the concept of knowledge itself is inherently complex, continually in transition, and its complete value in terms of

foundational organisational theory is yet probably to be fully explored. Nobel laureate Herbert Simon highlighted a shift in the concept of "knowing" in 1996, stating that the emphasis has moved from retaining and reproducing information to accessing and applying information concepts.

The dynamic nature of digital market enablement continuously disrupts the equilibrium around which business models strive to adapt. The success of companies in today's competitive landscape hinges on their ability to consistently generate new knowledge, effectively share it across the organisation, and leverage emerging technologies and services like cloud computing. These efforts differentiate innovative, forward-thinking organisations from their traditional counterparts. As Nonaku (2007) points out, in an unpredictable economy, knowledge becomes the primary source of long-term economic advantage. The ability of modern organisations to thrive in the market depends on their effective management of knowledge. He claims that only a small percentage of managers truly grasp the essence of knowledge and its full potential. In the Western world, knowledge is often limited to quantitative, formal, and systematic data, with organisations viewed as mere information-processing machines. In contrast, Nonaku compares this perspective to successful Japanese organisations, where managers rely on tacit insights, personal intuitions, and subjective collective ideals of their workforce to make decisions. The utilisation of knowledge creation tools becomes crucial for maximizing the benefits of continuous improvement (Nonaku, 2007).

According to Fosnot and Perry (1996), the aim of instruction is to develop behaviours or skills that promote cognitive development and deep understanding. Instead of viewing learning as a natural outcome of maturation, it is recognised as an active process where learners construct knowledge through reorganisation. Moreover, learning is acknowledged as a complex and inherently nonlinear phenomenon, contrasting the previous linear perspective. Fosnot and Perry (1996) contend that this shift in perspective emerged due to the recognition of learning's intricate nature. Constructivism, originally rooted in cognitive science, has expanded into a distinct field. Cobb (1994) emphasises the importance of distinguishing between pedagogical theory and the theory of knowing, as they are sometimes confused. He asserts that even passive engagement, such as listening to a meaningful conversation, involves active attempts to construct new knowledge in one's mind. The fundamental principle is that all knowledge is built upon prior knowledge, regardless of the instructional method employed.

Catalano, A.S., et al. (2018) argue that despite the inherent role of failure in everyday human activities, the language we use to describe deviations from desired outcomes carries negative emotions and social stigma. Failure is often more common than success, yet it is less openly discussed and

documented. Our tendency is to categorise outcomes along a success spectrum, where even partially successful actions are considered as achievements, thus downplaying the significance of failures. Redford and Taber (2000) highlight the general strong aversion to documenting and examining failures, which is a crucial step in building a culture that recognises mistakes and setbacks as valuable learning opportunities. To maintain support from society and counter feelings of vulnerability, we tend to focus on sharing stories of hope and optimism. However, this approach limits our ability to conduct comprehensive investigations into failures and the marginal successes that can emerge from them.

Pan (1999) argues that the transformation of an organisation into a learning organisation often requires a profound and potentially disruptive transition. This necessitates fundamental changes across various aspects of the organisation, including its design, work environment, technological infrastructure, reward systems, organisational structures, and policies. Overcoming employees' entrenched attitudes and behaviours poses a significant challenge since old ways of thinking and operating are deeply ingrained in both formal and informal structures, impeding change efforts. Many individuals have become accustomed to a culture of knowledge hoarding, which makes transitioning to a culture of knowledge sharing highly challenging. The shift from knowledge hoarders to knowledge sharers represents the most formidable barrier in successfully implementing knowledge management practices. In many organisations, being a knowledge holder has traditionally conferred power and influence, as the selective dissemination of knowledge was a means of preserving authority when knowledge was scarce. However, the dynamics today have completely changed. With the abundance of information available, entities who provide access to rapid, accurate information and knowledge have become increasingly valuable (Pan, 1999). We will now move into the management of learning and begin in the next section with the dynamics of how people learn. We will look at the critical intersection between effective knowledge management practices and the processes that govern human learning.

2.5 How people learn

In this section we will examine how individuals learn and in the next one how teams learn. There are numerous theories that aim to enhance the individuals' understanding of the world of learning, and this section explores some of these theories. When it comes to categorising learning contexts, two primary settings stand out among other forms of classification. In most cases, individuals acquire knowledge either through independent learning or by being part of a group or community, such as within their workplace, where they can learn alongside and from others (Sarojni et al., 2018). Notably, F. Kirschner et al. (2009) argue that groups have a greater capacity for processing and transferring information among members, leading to the construction of higher quality cognitive representations compared to individuals learning in isolation. However, this assumption holds true only if the entire cognitive load, comprising complex learning tasks, can be shared among all group members effectively. Conversely, individuals learning through similar challenging activities would consume all their individual processing capacity to memorise interconnected information elements, putting less effort for collaboration within the team.

Taylor and Rohrer (2010) assert that making learning challenging in a purposeful and appropriate approach improves the retention, retrieval, and transfer of knowledge in a variety of learning situations. Increased mental activity is induced by increasing the number of challenges, which strengthens encoding, reinforces the learning process, and facilitates retrieval by causing individuals to exert more effort in the processing of information. Practitioner training approaches that are less difficult to learn eventually result in inferior performance on the ground. Taylor and Rohrer (2007) discovered that increasing the complexity of training in terms of individual challenge, results in better outcomes and improved long-term learning. Individual learners are frequently wrong in their assessment of their own level of understanding. According to Kornell, N., and Bjork, R.A. (2008), individuals depend on rapid knowledge retrieval to facilitate long-term memory retention and the transfer of that knowledge to different contexts and situations. Better understanding of the types of instruction and learning situations that will permit accurate evaluation of learning will ultimately lead to enhanced projections of future performance and optimised self-initiated training methods.

According to Kolb (1984), learning can be defined as the acquisition of abstract concepts that can be applied in a flexible manner across a wide range of situations. His theory holds that fresh opportunities and experiences act as catalysts for the development of new concepts. According to Kolb's definition, learning is the transformative process through which knowledge is constructed through firsthand experiences (Kolb, 1984). Additionally, Kolb establishes that learners are active agents who apply their

ideas to the surrounding environment and understanding learning is linked to the observation of the outcomes of their actions.

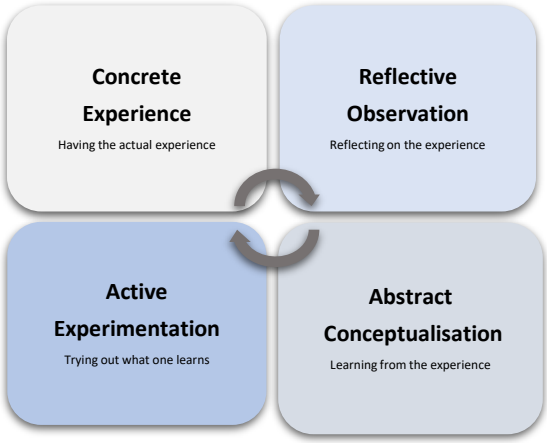

Figure 10 - Kolb's Experiential Learning Cycle

Kolb's experiential learning cycle (refer to Figure 10) commences with a tangible experience, which serves as the starting point. This experience can be either a new context or a revisit prompted by new thoughts or ideas. It offers the learner an opportunity for introspection and reflection, leveraging the learner's prior knowledge or experience. The key aspect at this stage is to identify any disparities between the learner's prior experience and their understanding of the situation. Subsequently, through reflection and analysis, the learner can generate new ideas or modify existing conceptual frameworks. Kolb emphasises that learners can draw upon their own knowledge and experience to facilitate learning. Reflecting on the team's applied experience, everyone can determine areas of improvement to complete the cycle before embarking on a new learning experience.

Newly formulated learning opportunities or revised concepts tend to stimulate further research. According to Kolb's model, complete learning can only be achieved when an individual successfully completes each of the four stages in the cycle and gaining self-awareness. Each stage of the cycle represents a valuable learning method on its own. As learners advance through the learning cycles, they progressively construct more intricate and abstract knowledge frameworks that align with their specific learning objectives at that stage of the learning journey.

In line with the joint declaration expressed by Attwood M. et al (2000), learning holds the potential to be the most significant, captivating, and enjoyable aspect of our individual and collective experiences. However, learning can also be challenging and can give rise to distress and disappointment in our lives. The key to thriving in today's complex and uncertain world that's continuously adapting itself, lies in our ability to learn how to learn and take control of the learning process. Moreover, the joint

declaration emphasises the vital importance of embracing and celebrating continuous learning as a valued attribute within our organisation. This constitutes one of the key dimensions of learning highlighted in this joint declaration.

Furthermore, it is essential for all managers to prioritize the development of a culture of learning by encouraging individuals and providing personal assistance and coaching. This commitment to learning can be embedded within job roles themselves. Being an exemplary learning role model entails demonstrating how to learn from one's own mistakes and effectively articulating and sharing acquired knowledge. This can be facilitated through efficient procedures within organisations that connect individual learning with the collective learning that occurs within and between teams and functions.

An open approach that promotes a healthy dialogue about strategy and decision-making at all levels, encouraging curiosity, inquisitiveness, and diverse perspectives as a natural and regular occurrence rather than an occasional exception. Lastly, businesses must find ways to inspire employees to take risks, generate new ideas, and explore novel options (Attwood M. et al, 2000). Having researched the dynamics of individual learning, the review extends into the collaborative domain of team learning. Understanding how people learn provides a foundation for examining the intricate interplay within the team and the collective knowledge sharing processes that contribute to effective team learning.

2.6 Motivation to learn

Wlodkowski (2010) discusses how human motivation is a significant factor for all organisations, and it is a topic that is frequently discussed as we try to anticipate its future. Understanding the reasons behind people's actions and decisions is a common interest. Wlodkowski argues that much like the economy's unpredictable inflationary tendencies that seem to be beyond our control and difficult to foresee, the causes of human behaviour are similarly abstract and challenging to explain or predict. In the realm of project transformation, motivation and understanding people's actions and thought processes are crucial considerations. Motivated learners strive to master a language to effectively communicate with others and gain a deeper understanding of themselves. Interestingly, individuals who are considered successful learners are those who enjoy engaging with the target culture, as well as those who have a strong desire to integrate the culture into their daily work (Dornyei, 2001).

Herzberg's expressive motivation model categorises both motivation and psychological well-being as two dimensions of behaviour that can be assessed (Herzberg, 1968). When it comes to transformation projects involving teams within organisations, addressing motivation becomes crucial. As Hofstede and Schein (1999) suggest, an organisation is comprised of individuals and the interpersonal interactions that occur between them, rather than merely being a physical structure or a set of rules and regulations. It is within these interpersonal relationships that organisational factors, such as motivation, are generated.

Motivation is often regarded as a challenging skill to learn and master, with some people mistakenly believing that certain individuals possess an innate ability to motivate others, while others do not (Keller, 1987). However, it is possible to create conditions that stimulate people's interest in their environments and establish situations that motivate individuals, even though it may not be possible to motivate everyone. By considering four essential human characteristics and the accompanying motivational dynamics, the challenging task of motivating learners can become more predictable and manageable. These characteristics include attention, relevance, confidence, and satisfaction, all of which contribute to overall motivation. Vero and Puka (2017) affirm that capturing learners' attention and stimulating their curiosity is crucial for maintaining their interest. Addressing the relevance of the material to the learners' needs and goals is essential for developing a positive attitude. Building learners' confidence instils the belief that they can achieve their goals, reinforcing satisfaction by recognising and celebrating achievements. To enhance motivation in a rational and predictable manner, it is necessary to have a clear understanding of the key components of learning motivation and the strategies that positively influence these components. The next step is to determine the

specific strategies to be employed, their quantity, and how they will be integrated into the project. The following section aims to investigate how teams collectively engage with and sustain motivation whilst at the same time sheds light on the interconnected dynamics that drive effective team learning initiatives.

2.7 Team learning

Creating a conducive environment that develops effective team learning requires promoting communication among team members. The research conducted by Decuyper et al. (2010) identifies various categories of communicative behaviours and their relation to the team learning process, including sharing, co-construction, and constructive conflict, all of which contribute to the development of shared mental models. This highlights the importance of building shared cognition to enable productive collaboration. Additionally, studies such as the one conducted by Robbins S.E. (2021), emphasise the significance of complementary activities like team reflexivity, team action and boundary crossing, which have been identified through multiple case studies. Notably, the study by Robbins S.E. (2021) found that explicit knowledge boundaries enhance the value of learning through structured communication across these boundaries. To establish team boundaries, professionals, research leaders, and mentors often introduce tools and protocols that support teams in their daily work.

The team learning processes described above play a crucial role in enabling teams to adapt and grow through their collective experiences. Within an organisation, effective team learning is a key component of organisational learning, allowing members to understand how to collaborate effectively and navigate the challenges of a constantly evolving environment. To achieve this, strategies need to be implemented to support innovative, collaborative, and effective learning within teams. However, achieving high-performance teamwork can be challenging, as highlighted by O'Neill and Salas (2018), with many teams falling short of their full potential due to the complexities of the modern work setting and industry trends in team management.

Puente-Palacios et al. (2021) found that organisational managers can enhance team outcomes by facilitating the development of social processes such as influencing and learning within the team. The research findings demonstrate that team learning is a collective phenomenon and that significant variations exist across different learning teams. As noted by Manion K. et al. (2020), a broad range of literature supports the notion that learning in teams can effectively embed concepts and promote the necessary levels of cooperation and work ethic. Learning in teams also nurtures the development of collective problem-solving abilities, conflict resolution skills, collaboration skills, and project management capabilities. Effective teams understand how to adopt self-reflection, facilitate active learning, and achieve successful outcomes through their shared experiences.

While some organisations understand the inevitability of change, many lack the necessary expertise to drive the transition within their teams. By establishing effective teams, organisations can shift from static entities to reflexive and continuously evolving systems, leading to greater adaptability. Kayes and Burnett (2006) argue that combining systematic review and integration in the team learning process supports the development of successful teams within organisations. The insights gained from this research are particularly relevant to transformation projects aiming to create a learning organisation. To tackle complex challenges, organisations rely heavily on the teams' ability to learn from one another. Effective teams also play a crucial role in generating new knowledge through practice, collaboration, interaction, and training sessions. Additionally, teams possess the capability to enhance the performance of dealing with ad-hoc jobs or project activities, further highlighting their importance.

Davidson and Major (2014) assert that when teams fail to achieve their learning objectives, it negatively affects the performance of their respective organisations. Team learning is no longer confined to the training space. It is now widely recognised as crucial for the success of businesses, regardless of the organisation's size. As organisations adapt to meet the demands of knowledge work, the significance of team learning grows (Van Der Vegt G. S., Bunderson J. S., 2005). The effectiveness of team learning relies on individuals participating in a coordinated process that connects knowledge and behaviours to achieve a shared objective as a group. In this regard, team learning differs from individual learning within the same team. The key distinction is that individual employees must engage and coordinate with one another for team learning to occur. Optimal team learning takes place when team members work interdependently towards a common task or objective within defined parameters. However, individuals who function interdependently can also participate in team learning by maintaining regular contact with other team members, as proposed by Weick, Suttcliffe, and Obstefeld (2005). This contact has the potential to influence the thinking, actions, and meaning of each team member. Moreover, the experiences shared are typically grounded in real-world situations or established work procedures, rather than being purely hypothetical exercises. Effective team learning occurs when individuals share their experiences and contribute their unique contextual knowledge to the rest of the team.

According to Eisenstat et al. (1990), sustainable organisational transformation is most effectively achieved when task alignment begins at the organisation's periphery and gradually progresses inward. While change can also originate from the top, effective change requires learning and is ideally implemented through a bottom-up approach. This implies that senior executives, who grew up in an era dominated by hierarchical organisation and management, can benefit from learning new

techniques from younger unit managers who are closer to the operational level. Once an organisation defines new roles and responsibilities, individuals must acquire the necessary skills to ensure the proper functioning of the new structure. The formation of teams with new objectives and responsibilities inherently requires learning. Changes in job roles, responsibilities, and connections stimulate the development of new competencies and attitudes. Moreover, changes in coordination patterns raise employee participation, collaboration, and information exchange. The main goal of change is to create a learning organisation capable of adapting to a dynamic competitive environment. Consequently, the organisation must continually observe its own behaviour to learn how to learn effectively (Eisenstat R., Spector B., Beer M., 1990). The next section focuses on the design of learning programmes in this process.

2.8 Learning design

In recent years, the field of learning design, also referred to as instructional design, has experienced significant growth. MacLean and Scott (2011) note that these terms are often used interchangeably and share similar concepts. Both approaches revolve around the aim of creating comprehensive learning experiences and the corresponding learning materials. The term "learning design" refers to the process of defining educational goals and pedagogical methods used by trainers to analyse, assess, and enhance training opportunities. It involves the application of various training approaches, resources, and theoretical frameworks to ensure a positive learning experience in a specific context. According to Johnson and Johnson (1974), instructional theory is prescriptive in nature, taking a dogmatic approach by seeking to establish the most effective methods for acquiring knowledge or mastering specific skillsets. While there is ongoing debate about various aspects of the training environment, many trainers believe that a competitive goal structure, where some trainees are expected to outperform their peers, is the most practical approach. However, it is important to note that the powerful influence of goal structure on trainee behaviour deserves more attention, and further in-depth research in social psychology is needed.

Johnson and Johnson (1974) propose four distinct goal structures that can be considered in a learning environment: competitive, cooperative, individualistic, and no structure. Each goal structure carries an underlying set of values that trainees gradually absorb and interact with unconsciously. They suggest that the goal structure implemented by trainers has an impact on both the learning process and its outcomes. Designing effective learning experiences requires considering the various facets of learning processes and outcomes. According to Conole (2014), designing for learning is a challenging task in society today. While new learning technologies offer numerous opportunities for multimedia interaction, communication, and collaboration, trainers often lack the necessary level of digital literacy skills to make pedagogically informed design decisions and leverage available technology effectively. The application of learning design has evolved over the past decade to provide guidance and support for training design and redesign practices, helping to address this skills gap among trainers. The development of learning design emerged from a recognised need to bridge this growing industry gap. Eppler and Burkhard (2007) assert that learning design is built on three core principles: guidance, information visualization, and knowledge dissemination. These principles form the foundation of learning design fundamentals. The guiding principles serve as the overarching framework for the key components of a typical learning design framework. The framework in Figure 11 illustrates how these encompass seven essential characteristics of effective design that are crucial for supporting a comprehensive learning context (Conole, G., 2014).

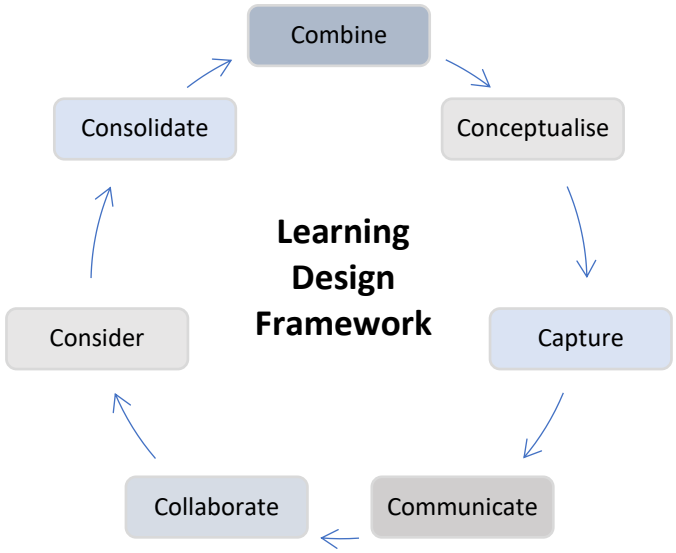

Figure 11 - Learning Design Framework

According to Mangaroska and Giannakos (2018), their research findings illustrate the evolving design patterns and learning phenomena that arise from the combination of learning analytics and learning design in the current landscape of learning technologies. They suggest that future studies should focus on developing frameworks for acquiring and standardising learning design data, emphasising the importance of grounding such frameworks in learning theory and learning analytics. They argue that documenting the decisions made by trainers and educators regarding learning design has the potential to impact subsequent learning activities and performances over time.

According to Fink (2013), the proliferation of learning technologies needs to make use of analytics to uncover significant learning phenomena and portray the experiences and behaviours of learners both the obvious and those generally accepted. This is a fundamental key component of evolving learning design. Fink adds that this is because analytics can more precisely portray the experiences and behaviours of learners. The reason for this is that analytics based on big data can provide more accurate movements of trainee behaviours. Going forward, the academic discipline of learning analytics is an extremely important component of improving our understanding of human learning as well as the fields of learning and instruction more generally. In the context of learning design, the development and validation of metrics such as processes, outputs, and activities are even more possible. In addition, learning analytics helps to support and advance evidence-based practises, which are obtained from the evaluation and assessment of learners' progress, as well as their motivation, attitudes, and levels of satisfaction. Goh et al. (2012), attest that "learning capability" refers to the managerial strategies, processes, and organisational structures that facilitate learning within an entity. Their research establishes that there ais the beneficial link between an organisation's learning

capability and its overall financial and non-financial performance. They add that learning capability increases in environments where continuous learning is encouraged, mistakes are viewed as learning opportunities, and employees feel safe to share and innovate. Learning capability is further stimulated through team-based learning initiatives that include collaborative problem-solving and knowledge sharing.

Bok (2003) argues that the effectiveness of learning analytics design is limited without a solid theoretical foundation and contextual interpretation of the collected data. In this regard, learning design plays a crucial role as it serves as the basis for assessing and interpreting data, understanding learner behaviour, and identifying effective or inefficient learning patterns. While originally rooted in business intelligence and recommender systems, the prominence of training data mining and learning analytics has grown in the past decade, indicating a shift towards a more learning aware perspective (Siemens, 2012). Similarly, Wiley (2000) states that the incorporation of learning design as a structured process has significantly influenced pedagogical decision-making. Courses designed with learning design principles place greater emphasis on skill development and reduce activities focused solely on assimilation. Collaboration becomes essential in creating training resources, and the use of learning design visualizations enables trainers to better understand how to enhance content and delivery (García et al., 2012).

Adaptive learning leverages technology to dynamically adjust the learning experience based on individual trainee needs and performance from a learning design perspective. It empowers learners to progress at their own pace, providing targeted support and challenges to optimise their learning outcomes. As claimed by Muñoz et al. (2022), adaptive learning acts as support platform, that facilitating effective personalised training experiences for every trainee. It enables trainers to create customised resources and activities that cater to each trainee's distinct learning needs. This approach demands trainers to consider differentiated instruction methods, delivering content tailored to individual learning processes. Adaptive learning often accelerates instruction and practice, matching the trainee’s unique capabilities.

According to Garcia et al. (2012), trainers are to consider moving away from traditional teaching models, such as the "teach, practice, apply" approach, and instead adopt designs that facilitate the development of diverse skills to support learners academically and in the workplace. This shift is made possible by visualising the learning design stage in advance. Considering the practical implications for the training sector, researchers, trainers, and policymakers should recognise how learning development models impact subsequent learning and performance over time (Rienties et al., 2015).

The section to follow shifts from the assessment of learning success and explores the influence of technology on the learning landscape. Bridging these discussions reveals the evolving dynamics where effective evaluation practices intersect with the transformative impact of technology, shaping the contemporary landscape of training outcomes.

2.9 Impact of technology

Raja & Nagasubramani, (2018) claim that recent research into the preferences and learning experiences of modern trainees, it has become clear that there is a growing pattern towards employing more immersive technologies to the learning process. The use of contemporary equipment and interactive tools have the potential to enhance trainees' engagement. Increased interactivity in training makes the learning experience more captivating and appealing for most trainees. Furthermore, technology is conducive to more effective knowledge transfer. Consequently, the integration of modern technology in various aspects of life, including training has become indispensable. This reliance on technology has been observed to enhance cognitive processes, enabling faster information processing. Today, our dependence on such innovative tools that simplify and enhance our lives has becoming increasingly prevalent, even within training institutions and on-the-job training programs.

As argued by Kumar Basak, S. et al (2018), the use of digital media in the training sector has been experiencing a rapid and consistent development in recent years. This widespread adoption of digital media has facilitated ongoing communication with trainees and provided diverse platforms for various assignments and whilst being supported from multiple sources. As digital technology continues to advance, an increasing array of applications is available to support the development and learning of trainees, even beyond the training environments. The positive impact of technology on teaching and learning is widely accepted, and there is a consensus that current and future technology use is heading in the right direction. However, it is important to acknowledge that certain barriers hinder the effective utilisation of technology. Barriers such as affordability and availability need to be challenged to ensure the continued growth of the future training room and remote-based training technologies.

According to Ra et al. (2019), research examining the impact of technology on jobs and skills has identified two main themes. Firstly, the initial pessimistic expectations of job losses caused by technological advancements have been replaced with more optimistic projections of a net increase in employment opportunities. This shift in outlook has alleviated the fears held by many individuals. Secondly, new occupations have emerged across various sectors, requiring individuals to acquire new skills to work in these fields. These changes indicate that the new jobs are more likely to involve nonroutine activities and require higher levels of cognitive capability, which are tasks less susceptible to automation. Consequently, ongoing training and development will be crucial as the nature of work continues to evolve. Individuals will need to develop the ability to unlearn and relearn, demonstrating a willingness to adapt to these changes.

Cunha and James (2007) claim that the incorporation of technology in training environments has the potential to enhance access to training while simultaneously improving its relevance and overall quality. The impact of information and communications technology on learning and training is significant for both trainers and trainees, as it facilitates the acquisition and absorption of knowledge. By promoting active engagement, technology can enable more effective learning experiences. Additionally, information and communication technology tools play a crucial role in data calculation and analysis for assessments, ensuring that trainee performance reports are digitised, readily available, and easily accessible for follow-up and reviews. With the aid of technology, learners have greater control over their learning, allowing for personalised experiences and the opportunity to tackle real-world challenges, as opposed to relying on traditional methods of memorization and routine learning. Consequently, this can lead to increased learner engagement and a broader scope of learning.

Tamim et al. (2011), claim that technological advancements promote both the manipulation of existing information and the generation of original knowledge, leading to the creation of new products and services. Moreover, technology can promote an integrative approach to teaching and learning by reducing the artificial division between theory and practice. This stands in contrast to the conventional classroom setting, where the focus is typically placed on a singular aspect of the subject matter. Additionally, technology has the potential to serve as a catalyst for improved critical thinking and learning. By embracing constructivist learning theories, trainees can explore and adopt new methods, moving away from extensive memorisation and repetitive conditioning. As learning becomes increasingly learner-centric, technology can provide valuable feedback through various interactive features, enabling a more engaging and interactive learning experience.

According to Rudman (2016), the world wide web is widely recognised as the fastest-growing publishing medium in history. To remain relevant in this rapidly evolving technological landscape, training is essential, particularly considering the unique progression of the web. While Web 1.0 was characterised by static information, Web 2.0 introduced interactivity. Now, with the emergence of Web 3.0, we are witnessing the next phase of the web's evolution. Web 3.0 is anticipated to offer a more advanced, artificially intelligent and integrated web experience, where machines can comprehend and organise data similarly but faster than humans. This will enable an enhanced global data sharing, allowing any type of data to be exchanged and interpreted by devices connected to networks worldwide. The ongoing transformation of the web presents both opportunities and

challenges for businesses and training. These opportunities include the autonomous integration of data and services, enhancing existing web capabilities and introducing new functionality.

Figure 12, Hutchins (2016) presents a model adapted from O'Reilly and Forrester's research, illustrating the transition from a content repository and static information approach to a more dynamic user-generated interaction and social mediation. Subsequently, Table 3 highlights the increasing prevalence of dynamic technologies that are reshaping the way people interact and learn.

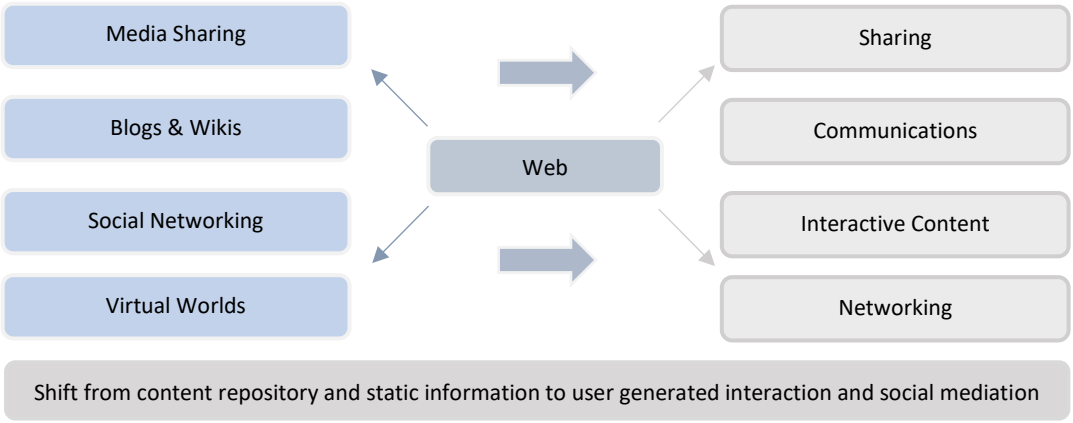

Figure 12 Static to interactive shift (adapted from O' Reilly and Forrester)

Web 1.0	Web 2.0	Web 3.0
Mostly Read-Only	Wildly Read-Write	Portable and Personal
Company Focus	Community Focus	Individual Focus
Home Pages	Blogs/ Wikis	Live-streams/ Waves
Owning Content	Sharing Content	Consolidating Content
Web Forms	Web Applications	Smart Applications
Directories	Tagging	User Behaviour
Page Views	Cost Per Click	User Engagement
Banner Advertising	Interactive Advertising	Behavioural Advertising
Britannica Online	Wikipedia	The Semantic Web
HTML/Portals	XML/ RSS	RDF/ RDFS /OWL

Table 3 Web 1.0 to Web 3.0

Gilson et al. (2015) suggest that the increasing number of studies conducted on virtual teams in the past decade is not surprising, given the increase of new communication technologies and the growing utilisation of work teams. The ability to collaborate effectively and communicate clearly are identified as two key drivers linked to innovative behaviour. Previously disconnected individuals now have a better opportunity to work together and collaborate as a team, thanks to developments in virtual technologies. These technological advancements have significantly improved team interactions. Consequently, virtual technologies hold tremendous potential for businesses, and the field continues to offer numerous research opportunities both now and in the future.

Artificial intelligence (AI) is a rapidly advancing field that is profoundly impacting organisations, learning, and the training landscape. Integrating AI into an organisation's operating model is becoming crucial as it shapes task performance and is establishing a new learning equilibrium that is fundamental to sustain new and future operations. Bhattacharya (2021) argues that AI not only substitutes some human activities but has the potential of transforming the entire concept of how organisations work and consequently the future training and learning requirements. The significant impact of AI in mimicking human behaviour will reshape the nature of processes and organisations, requiring a new skillset to operate efficiently.

According to Johnson and Johnson (2018), information and communications technology plays a crucial role in developing collaborative and cooperative learning by enabling trainees and trainers to connect and collaborate regardless of geographical barriers or time zones. Technology also offers trainees a unique opportunity to engage in group work with individuals from diverse cultures, enhancing their communication skills and broadening their understanding of the world. The use of technology in learning continues to evolve, promoting increased collaboration among trainees both within and outside the training environment, and establishing a more dynamic relationship between trainees and trainers. Collaboration is not only a method of interaction but also a personal lifestyle in which individuals take responsibility for their actions, including their own learning (Davidson, N., Major, C. H., 2014).

Silalahi and Hutauruk (2020) suggest that the implementation of cooperative learning in a training setting prioritises collaboration among trainees working together in small groups. This approach is based on the belief that trainees can better understand and grasp concepts when they engage in discussions and debates with their peers. Participating in cooperative learning develops positive behaviour in trainees, as they become motivated to learn and actively engage in various activities. To ensure efficient use of time and productive activities, trainers need to exercise creativity in designing learning activities. By modelling online learning systems after cooperative learning environments, learners gain access to a wide range of instructional resources. However, challenges such as limited internet capacity or access, lack of experience with technology among some trainers and trainees, and uneven internet networks can at times hinder the effective global adoption of online learning. Implementing cooperative learning methods, regardless of the medium, can enhance the effectiveness of learning. Trainees can benefit from this approach by gaining a deeper understanding of the subject matter and improving their learning outcomes through collaborative work with their peers.

According to Schmidt and Tang (2020), the digitalisation of society is causing a profound transformation in various aspects, including work environments and training. In educational contexts, this transition is occurring whether deliberate efforts are made to ensure the continuous improvement of teaching and learning environments or not. While the integration of technology in education is not a new concept, the rapid pace of technological innovation, particularly in the areas of the internet, information and communication technology, and digital technologies, is unprecedented. Education often reacts to disruptive technologies emerging in other industries and subsequently incorporates them into existing educational cultures and institutions. As new trends and breakthroughs in digital technology become more predominant, the potential of digitalization in training become more challenging requiring different capabilities. Consequently, there are both opportunities and challenges that must be addressed in the future.

With regard to the term “digitalisation”, Selwyn (2016), defines it as to the utilisation of technology to renew, simplify, and enhance processes, tasks, and products. Selwyn provides the following definition of digitalisation:

- It impacts internationalisation by offering online and flexible training programs, encompassing various aspects of quality, including organisational issues, technological infrastructure, and pedagogical approaches.
- It involves multiple aspects of quality, ranging from organisational issues to technological infrastructure and pedagogical approaches.

In today's training landscape, digital technology plays a crucial role. Licensed institutions operate within a high-tech environment, and alternative forms of online training have emerged to challenge the traditional educational system's dominance. Many experts argue that the rapid digitisation of training in the past decade has undoubtedly had a positive impact on the training and learning process (Selwyn, N. 2016). The next section looks into the evolving dynamics of effective evaluation practices.

2.10 Evaluation of learning success

The remining question to be examined is how the effectiveness of learning and learning programmes can be measured. With the digital economy set to carry more weight in the future, one of the most significant challenges faced by companies is the ability to translate learning consistently, rapidly, and effectively into improved performance. However, this consideration is often given low priority in the usual practices of most organisations. Brinkerhoff (2006) emphasises that training effectiveness should be measured by how well newly acquired knowledge is applied in ways that directly contributes to valuable outcomes for the business.

It is important to recognise that training alone does not guarantee improved performance or efficiency, despite building capabilities or increasing capacity. Allmendinger (1989) argues that the primary goal of a measurement strategy should be to investigate and understand the various factors that hinder training from being more successful. Evaluation findings can then be used to guide key stakeholders in the organisation on how to improve training impact rates and achieve consistently higher returns on training investments. The objective is to shift the current model and achieve a return on investment that justifies the resources allocated to training.

According to Smidt et al. (2009), analysing the provided data in support of a study or training program is an essential step in evaluating its effectiveness. Kirkpatrick (1996) introduced a four-level methodology for training evaluation, consisting of reaction, learning, behaviour, and results. This model serves as an example for measuring the impact of training. The first level of evaluation, known as the reaction level, often involves trainees completing a post-course evaluation to express their thoughts about the training program. This assessment focuses on the level of interest, motivation, and attentiveness demonstrated by participants, rather than assessing their actual learning outcomes. The second level, referred to as "learning," assesses what trainees have learned in terms of knowledge and skills acquired during the training. Trainees may engage in written assessments or practical evaluation to demonstrate their acquired capabilities. This level of evaluation allows trainees to showcase their understanding of the presented concepts and information throughout the duration of the training program.

In Kirkpatrick's model, the third level of evaluation is based on trainees' actions or performance. This evaluation examines how well trainees apply their newly acquired knowledge and skills in their job roles. It aims to determine if trainees effectively utilise their new abilities in their work environment. The fourth and final level, also known as "results," measures the overall impact of the training. This level considers financial and morale effects on trainees. Various measurements can be employed, such

as problem-solving abilities, incident resolution, or staff retention, to assess the comprehensive impact of the training program. Conducting a thorough evaluation of training programs involves analysing data, assessing trainees' reactions, measuring learning outcomes, evaluating behaviour and performance, and determining the overall results and impact of the training (Smidt, A., Balandin, S., Sigafoos, J., & Reed, V. A., 2009).

As cited in Menix (2007), successful program evaluation involves evaluating both the achievements and shortcomings of a training program whilst generating recommendations for its improvement. This approach should be taken into consideration when implementing effective program evaluation and development. Trainers are increasingly required to establish a clear link between education and training, employee and organisational performance, and training goals. Businesses are recognising the value of investing in their employees' training as an asset rather than considering it solely as an indirect cost of operations. In many instances, trainers are expected to fulfil the practical need of ensuring the ongoing implementation of specific activities or programs.

As technology increasingly permeates training, it is crucial to provide environments that ease trainers' apprehensions when evaluating outcomes including mistakes while experimenting with new technological approaches. In a competitive world, failure is often frowned upon. However, when evaluating technology-based solutions to enhance learning or personal productivity, a degree of setbacks is inevitable. It is important to evaluate failure as a valuable experience that can provide constructive lessons and insight.

The evaluation and implementation of active learning can be conveniently carried out online, starting from the training program or module design phase through to the evaluation phase. With the proliferation of online resources, learning has become more accessible and convenient, allowing trainers to monitor trainee participation levels. The future of online education will rely on active learning methodologies to ensure high-quality learning experiences that cater to diverse learning needs. The growth of online education is expected to continue and expand in the foreseeable future and beyond (Phillips, J. M., 2005).

Formal and informal evaluations can be conducted to assess the quality and effectiveness of learning and development activities, and the results should demonstrate alignment with the organisation's performance goals (Bindra D., 1974). However, comparing the efficacy of learning between traditional classroom settings and online learning environments can lead to an epistemological dilemma. Swan (2003) argues that if online learning is deemed inferior to traditional methods, it raises doubts about the validity of online training itself, rendering discussions on access, trainee and institution

satisfaction, and cost-effectiveness largely irrelevant. In other words, if virtual environments cannot deliver learning outcomes as effectively as conventional settings, it necessitates a re-evaluation and higher level of maturity for online training. Initially, many trainers believed that online training could never match the effectiveness of classroom-based instruction. However, we now have substantial evidence demonstrating that learners generally achieve comparable outcomes online, challenging scepticism. Technologies today provide that tools that are the key elements of the new global knowledge, which transformed information standards to innovational approaches needed for the acquisition of professional skills and competences on the basis of systemic vision and constant update of existing knowledge (Lyapina et al., 2019).

2.11 Conclusion -Gaps in the Literature relating to Digitalised Learning

Digitalised learning has experienced significant developments over recent years both within educational settings and professional training environments, particularly as a result of global pandemic constraints. The rapidly evolving learning domain has led to inevitable gaps in literature in various areas of relevance. The gaps are associated mainly with the rapid evolution of technologies and digital tools that are constantly emerging and innovating. Literature in this regard may lag behind in evaluating and understanding the effectiveness of these new pervasive technologies. This might contribute towards the main focus to shift more on the technology itself, giving rise to an imbalance on how digital tools align with the diverse pedagogical strategies and learning outcomes.

CHAPTER 3 - Research Methodology

3.1 The Philosophy of Research - Ontological, epistemological, methodological considerations and action research cycles

The research philosophy and methodologies used for this Academy project were based on a critical realist approach from an ontological standpoint. A critical realist position seeks to understand social phenomena in a way that acknowledges the complex, multifaceted nature of learning realities. From an ontological standpoint, critical realism holds that there exist multiple levels of reality, each with their own underlying mechanisms and generative rules. A realist approach was deemed to be the best suited for this type of project, and it maintains that there is a fundamental reality that exists independently of individual human perceptions and interpretations, but that the knowledge around this reality is often limited by the individual subjective experiences and social contexts.

Critical realism acknowledges that the understanding of reality is always mediated by one's own cognitive processes, cultural background, and social context. A realist approach assumes that social phenomena are often the result of multiple, interacting causal processes that operate at different levels of reality. This type of ontology enabled me to identify better the extent of the human experience as well as the true meaning of change as experienced by those directly impacted by this transformation. From an ontological standpoint, critical realism discards both positivism and postmodernism, which respectively claim that reality is objective and knowable that could be understood through empirical observation, or that reality can be entirely formed through human social processes. Conversely, critical realism holds that reality can both objective and subjective, and that our knowledge of reality is always temporary, conditional and context dependent.

Adopting a realistic perspective enabled me to understand better the relationship between reality and human knowledge, emphasising the importance of understanding the multiple causal processes that shape social phenomena while acknowledging the limitations of my own subjective perspectives. All the team members' views of how things truly were and how they worked daily had to be taken into consideration throughout the project as well as the ontological assumptions regarding what constituted the new digital reality of the Academy.

Within the context of this action research project, both critical realism and interpretivism contributed to valuable complimentary philosophical perspectives, providing insight into the complexities of

organisational change and human behaviour. Critical realism helped discover the objective processes influencing the organisational experience, while interpretivism allowed for a refined exploration of the subjective meaning of individual attributes to these experiences. Critical realism approach helped me consider the broader socioeconomic context in which learning and development initiatives were being implemented. Critical realism contributed also to help analyse how individual learners navigate and shape their learning experiences within structured training programs such as the ones offered by the Academy. This combined approach provided a holistic understanding that proved essential for diagnosing and designing effective interventions that sustained Academy change throughout the project term.

In the embedded researcher role, the ontological approach chosen assisted me in seeking answers to the research question posed for this research and at the same time identify the specific types of knowledge that existed and started developing around me as this project progressed. From an epistemological perspective, this transformation project assumed a predominant interpretivist approach aiming to understand how knowledge is developed and understood. Interpretivism as an approach to the research meant that my emphasises would focus on the importance of understanding and interpreting the meanings and subjective experiences of every individual at the Academy.

Opting for an epistemological approach that is prevalently interpretivist I aimed to understand every individual's experience, values and perspectives whilst at the same time look at knowledge that was socially developed along the years in context of the Academy. The research examined each context through quantitative surveys pre- and post- project, qualitative methods, one-to-one conversations, observation and quality-based analysis aimed at strengthening a more in-depth investigation of experiences and perspectives. Through an interpretivist approach I was able to value the importance of reflexivity, my own experiences and biases as well as how my background could influence the research process and findings. Notwithstanding the predominant interpretivist approach emphasising the subjective, socially constructed, and interpretive nature of knowledge in the context of a learning environment, the analysis was supported by a qualitative gaps analysis that helped me gain a greater understanding of the change that had been accomplished resulting from the implementation of this project. Corroborating information from multiple evaluation types put me in a better position to make the right inferences about change. The correct interpretation of data was crucial, as it allowed me to make sense of the subjective experiences and information gathered.

Figure 15 illustrates the various facets of this action research-based approach. The action research methodology focused on collaboration between myself in my role as researcher, the Academy team,

the management and members of the community of trainers. This project called for both collaborative and participatory action research methods as both were equally important for this project. The collaborative action research approach involved the Academy team and was aimed at identifying a new business model as an effective way to enhance professional development of each the team. The emphasis on the importance of collaboration and active participation amongst all the team was essential and it involved a series of stages, from building trust to designing and implementing actions. This approach engaged Academy team members to work together to identify current problems, think of solutions, implement tasks, and evaluate the effectiveness of such changes against set quality benchmarks. This focus was one that investigated an improved practice in a specific setting that was largely influenced by the pandemic scenario. The main goal of creating important collaboration was to develop practical solutions to learning challenges with the emphasis on improving everyday work practices. Collaborative action research was complemented with participatory action by setting the scene from a community of trainers' perspective. The approach involved the community of trainers in the research by encouraging them to take stock of the issues that were affect them. The primary goal was that of empowering community of trainers and related stakeholders to interact, identify over-all issues and pave the way to the identification of solutions and improve their work environments. This approach was particularly relevant in the context of this project as it helped to ensure that the trainers are actively involved in the process of improving the quality of learning.

3.2 The researcher as an embedded practitioner

3.2.1 The dual role

The dual and mutually beneficial relationship between my position as a Senior Manager at the Academy and the role of an embedded researcher can be viewed as a bridge between knowledge gathering and the opportunity to implement change. The embedded practitioner research approach allowed me to immerse myself in the research project setting, gaining an in-depth understanding of the issues, challenges, and opportunities at the Academy, whilst collaboratively working with stakeholders.

The purpose of undertaking this research was not only to develop my knowledge, but also to determine the value of acquired knowledge in assisting the Academy to reposition itself as a more significant training provider and in resolving practical difficulties that arose because of this transition. The embedded researcher role enabled a very direct connection between the theoretical aspect and everyday practise, and vice versa.

My researcher role in this project enabled the management team and Academy members to collaborate on a project that was bound to change what had become a consolidated model. Structuring the change process in granular detail was necessary to gain full management support, investigate openly existing areas of concern, leverage the firm's network experience, and produce new knowledge. My own personal development was positively impacted because of this experience. Allocating self-reflection time in a systemic manner, enabled me to concurrently investigate the work and processes adopted by every team member as part of the implementation whilst at the same time evaluate my own actions in my dual role of researcher and manager.

This Academy project was an opportunity after ten years of Academy operations to undertake a complete in-depth evaluation of everyday processes. This was particularly beneficial in my role as embedded practitioner as it enabled me to direct the project whilst addressing complex processes, particularly in relation to organisational change. Some of the tools used in this transformation project included surveying tools, process mapping, performance metrics and change management transitioning. These tools helped me gain a deeper understanding and capture the complexity of changes through time whilst being myself an integral part of the change. My everyday presence with the team enabled me to respond in a comprehensive manner to new and evolving contextual circumstances. This setting proved to be effective in assisting and facilitating the team in its transition from one operational model to the new one.

3.2.2 The impact of literature review

The literature review undertaken at the early stages of this project influenced the way I approached the planning, implementation and evaluation of the action research. As a researcher learning from previous research and established models, made this inquiry a thought-provoking experience that contributing to broaden the discussion and interaction with the various personas involved in the project. Reference literature and its interpretation supported me in broadening my insight that ultimately benefitted the project activities.

Drawing on insights from existing theory, I developed and personalised the research instruments used to support a bespoke approach aimed at contributing to the overall success of the research. For example, the Force Field Analysis by Lewin and the Change Equation by Beckhard and Harris's influenced the thinking process that led to the design of community interactive assessment, whilst the management tier survey was developed resting on Kotter's eight stage model. In making project presentations and developing team assessment tools, I was able to draw on and share Kolb's Learning Cycle and Peter Senge's Organisation Design Model, particularly on aspects such as the value of reflection and collaboration as well as a shared vision in enhancing team performance, adaptability and the importance of developing a team culture of continuous improvement and innovation.

The literature review was also helpful in steering the discussions towards recognised and proven models that could more readily positively influence the Academy's mindset. This approach helped me refine the research approach further, adding relevance in relation to established theoretical frameworks. Section 4.1.1 in the Chapter to follow outlines in more detail how the literature review has contributed to this research.

3.3 The Research Planning Process

The development of a new training model based on digitally-capable and a knowledge-driven organisation was the main objective leading to the actions carried out as part of this project. Figure 13 illustrates the high-level project timeline covered by this project over a stretch of thirty months. Details of each stage of the project is outlined in Section 1.9 and the details of activity in the relevant section of chapters 4 and 5.

3.3.1 Timeline

Figure 13 - Project Timeline

3.3.2 The Stages of the Project

Further to Figure 1, the action-research stages of this action research-based project are represented in Figure 14 below.

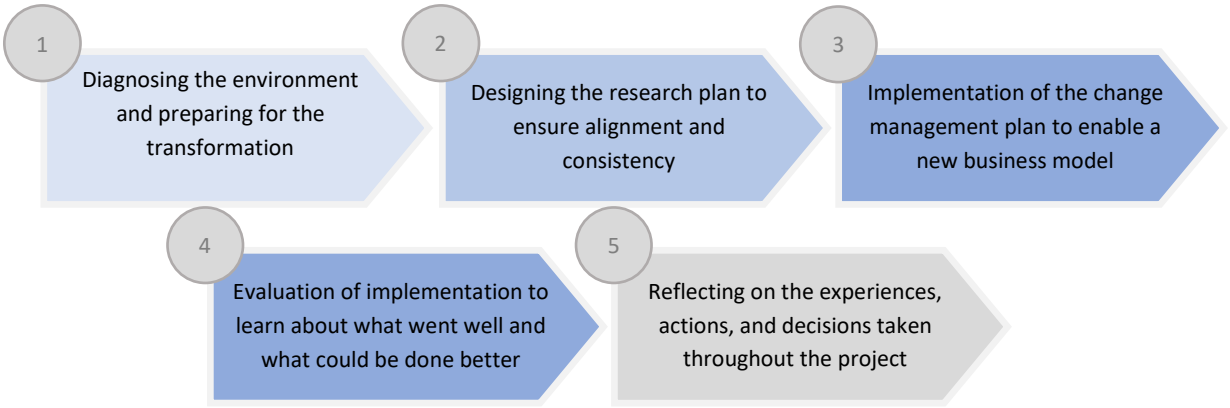

Figure 14 - High-level Project Stages

The project covered a thirty-month period that started with the diagnosis and design stage through implementation, evaluation, and reflection. Each stage of the process had a specific focus and a key objective in terms of the research approach. The initial months of the action research project focused almost entirely on diagnosing and understanding better the baseline for this change project. Having clearly established and quantified the challenges that needed to be addressed was essential in the first five months of the project. In line with the adopted collaborative and participative research action approach the diagnosis phase had to investigate both the internal Academy set up as well as the embracing business environment. Diagnosing the established structures was necessary to identify

issues related to the organisation, established processes, and gaps in adopted practices that required improvement. The initial five months of the project between September 2019 to February 2020, included the preliminary literature review covering the key areas of this research, an initial job and work processes review, investigate of available technology platforms and the development of overall plan.

Subsequent to the initial stage, the months to follow featured a series of project design activities, most important of which was the development of the research plan. The research design enabled me to plan how the data would be collected and analysed. This part of the project included finalising the research methods, identifying all data sources and the instruments for data collection. This term was centred on the period between February and June 2020. Also part of this stage were the key activities to follow, namely, the roll out pre-project team questionnaire to all Academy members, the design the open online event bringing together the community of trainers and stakeholders, the mapping of existing roles establishing responsibilities baseline consolidating the effort at diagnosis stage, the drawing up of new technology blueprint that would fully enable a new digital learning environment, defining the framework to be pursued from a quality assurance perspective, and finalise the change management approach that would be followed throughout the project implementation and evaluation stages.

The Academy team questionnaire that served as a comparative baseline for the project was administered January 2020 a few months into the project. The change programme questionnaire on the other hand was shared with management tiers early February 2020 an effort which was followed with one-to-one sessions by March of 2020. This exercise was valuable in highlighting key areas of change that needed to be given higher importance to ensure the right balance across various stages of transformation.

The implementation stage of the project began in July 2020 with a series of three key initiatives. Firstly, the project was introduced to the firm's top management, who were given detailed presentations on the change process and the expected deliverables and outcomes. Secondly, an online trainer community event was held, named "Transforming Education for the 21st Century," which helped the Academy connect with the rapidly changing external environment, that coincided with the first cases of imported SARS-CoV-2 pandemic in Malta. The last of the first three key initiatives in this stage was the coaching and evaluation program that was shared with all members of the Academy team. This effort was to be followed by a series of training workshops that were held on a weekly basis targeting different facets of the learning transformation. To follow, the subsequent step was to deploy the new

learning management platform into production. The implementation process adhered to the firm's rigorous standards, with a primary emphasis on configuring the core functions to align with the technology blueprint developed at design stage. Moreover, the platform incorporated interactions with the Academy's web portal and high-availability media streaming services.

The activity that took longest to address was the full integration of a new training process, which aimed to fully support a digital end-to-end process for the new business model. This effort encompassed every aspect of the trainee experience, from administrative tasks such as onboarding, support, tuition and assessments, to official examination management. The process commenced in December 2020 and concluded in September 2021. This exercise moved on hand in hand with the reorganisation of Academy operations to align with the new business model. In March of 2021, the process to align all the newly implemented processes to the quality standards started. This process paved the way to the full implementation of the quality assurance framework. Compiling of the new quality framework standard credentials started in April 2021 and took seven months to complete.

In the final phases of this collaborative action research initiative, the emphasis moved to project evaluation and reflection. The evaluation stage involved several levels of review, such as an assessment of the new learning environment introduced by the change program, an evaluation of the variance in terms of team competency and learning for all Academy staff and an assessment of the fit of the new quality and standards framework. The post-project evaluation for all Academy team members to document the knowledge gathered as a direct result of the project implementation was undertaken at the end of the evaluation stage. The reflection stage focused mainly on the full experience of the role as embedded researcher but also reflecting on the experiences with the team, the actions, and decisions taken during the research process.

3.4 Action Research Methodology

Action Research (AR) has grown exponentially across disciplines and evolved along with the development of social sciences (Rowell. L. et al, (2017). This research project may be regarded as a systematic study that aimed to evaluate change and actions as well as the effects of these changes in an organisational context. In many ways this approach represents a deep inquiry into my own professional practice and the collaborative process that was taken on to understand change. This action research came about at very particular time whereby complex social systems and practices were being challenged from the stems making change inevitable. As presented by Riel (2019), the benefits of collaborative action research may be summarised as the development of professional practice through continual learning and progressive problem solving; the achievement of a deeper understanding of organisational change through collective actions; and the improvement of the community in which one's practice is embedded.

The collaborative approach employed within this action research involved collaboration with the community outside of the Academy setting. This approach helped framing the context within which the change was to take place. As sustained by Gordon (2008), action research promotes and enables practical solutions to real-world problems and is a means of bridging the gap between research and practice.

At an Academy level, action research was applied to understand better the system of interactions that define the learning operation. Going back to Kurt Lewin, (refer to Section 2.2) he had proposed action research as a method of understanding social systems or organisational learning. His claim was that the best way to evaluate understanding is to try to effect change. A participative and collaborative action research required a systematic way of analysing the evidence of change. The research focused particularly on aspects of observation and data analysis in my action researcher role with the aim to build knowledge, apply theory, and change work practices.

3.4.1 Benefits of adopting an Action Research approach

Multiple compelling reasons could be identified as to why AR would neatly support this Academy change project. The AR approach builds on collaboration between the research and the practitioner side, which nurtures a greater sense of ownership in the change process itself. The key benefit in this regard was that by involving individual employees impacted by the change, AR increased the likelihood of a successful and sustainability project implementation. Another positive benefit of adopting AR was that it is sensitive to the unique context within which the Academy change was designed to take place.

By tailoring the change to the specific needs and characteristics of the Academy and potentially the community, AR does increase the relevance and effectiveness of both the research and the project.

Another aspect relevant to AR is that it allowed for ample flexibility throughout the research process, enabling me as a practitioner to adapt the approach as needed based on baseline and feedback results. This ultimately contributed to a more efficient and effective change whilst increasing the team motivation and commitment to the change process. The Academy benefited substantially from this project as it helped developing a renewed culture of ongoing learning and adaptation, leading to greater sustainability over time. The AR approach to change projects brings multiple facets together promoting practical solutions to real-world problems. Figure 15 below presents the Activity Theory Model, as developed by Engeström (2004), providing a comprehensive framework that brings together the various components of a human activity system in relation to one another. This model introduces a triangular model where the vertices define the tools, both physical and conceptual, that the subject uses to act on the object; the norms, standards, or conventions governing the activity; and how tasks and responsibilities are distributed within the community. He expanded the basic triangle to incorporate three additional mid-points, emphasising the importance of social and organizational contexts, the agent of change and the action that may be helpful in identifying contradictions or tensions within the system, which are often sources of change and development.

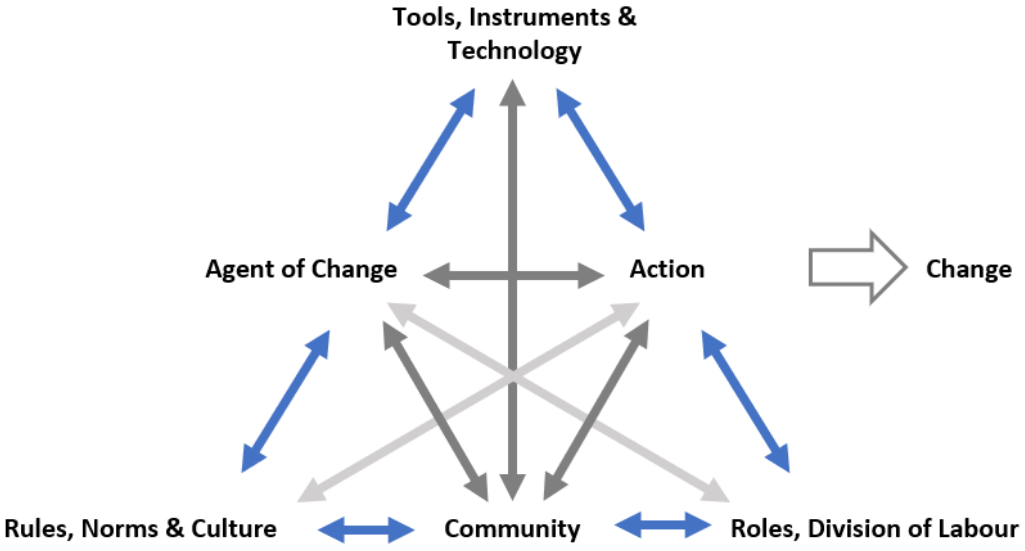

Figure 15 - Activity theory model: based on the work of Engeström, 2004

3.4.2 Drawbacks associated with the Action Research approach

Notwithstanding the outright benefits of taking an action research approach for this type of change project, there were limitations associated with this approach that required some proactive measures to limit the drawbacks and harness the benefits intended to drive change effectively. Implementing an action research cycle approach was time and resource intensive. This required an important resource investment across the duration of the project. Conducting the research, collecting data, implementing change activities and continuously engaging the team has put some additional demands on the Academy's resources. This limitation was overcome by structuring the change effort and team-based schedules to enable better individual planning.

Another consideration related to the team member's bias. The Academy members initially may have been hesitant to share and give feedback openly in a team setting. The main reason for this could be not to look weak in front of others. Given that biased in their responses could potentially affect the quality and validity of the data collected, added efforts were made together with the guiding coalition to ensure there was effective communication, trust-building, and the establishment of a safe and supportive work environment was established throughout the term of the research.

3.4.3 Participative Action Research (PAR) Methodology and the Academy initiatives

Action research puts an important focus on improving the practice through the involvement of practitioners with various segments of the community or place of work. A PAR approach specifically applies a collaborative approach this project that involves working closely with community of trainers and stakeholders to identify typical issues and share knowledge. Taking this approach and engaging directly with the community to understand better the training and learning environment adds value to this research process and frames better the envisaged changes to address the need of the learning community better. The engagement of the community is built around the concept of knowledge transfer, thought leadership and dissemination of information. Emanating from the project, my role in this event spanned from the ideation, design of the session, speaker line up, session production and embedding of digital interactions as well as session co-facilitation.

Considering the operational approach embraced by the Academy prior to the implementation of this research project, the methods employed by this project represented a significant paradigm shift. Taking a participative action research approach, the key method of sourcing information was through the community event for trainers that provided the project with immediate information at a time of major disruption in the training space. The online event that was open to the trainer community,

brought together top specialists from significant training fields to the Academy. The event was hosted by PwC Malta in conjunction with Microsoft together with the input of key organisations and social partners. The event held the necessary ingredients to draw towards it an important number of trainers as participants. This main event was an important milestone early in this research project and served as a core activity in instilling a heightened sense of needed change that served as the backdrop for this transformation project. The trainer audience attending the event were met with an informative series of interventions, particularly by attending experts and presentations that interchanged interactive instances throughout the session that engaged participants via continuous exchanges. A third of all registered qualified trainers in Malta attended this event.

The focus of this event was to bring together an expert audience that could challenge training concepts and share thought leadership knowledge with those present. By leveraging a variety of online tools, the webinar provided a unique opportunity to collect both quantitative and qualitative information with a highly representative audience in terms of trainer community representation. The tools and techniques used were designed to create interaction with the audience and included visually compelling interactive questions that shared back feedback with the audience the collective results instantaneously. There was no doubt that this event gathered additional interest amongst the audience in view of the various external variables associated to the global pandemic that had already by then left a mark on training operations across the whole nation.

As with other industry segments impacted by the pandemic, several interventions and adjustments were required immediately to address the gaps and new requisites that had emerged within the training space. In the case of this project, the findings of the event backed the business case for new thinking, suggesting unequivocally that it was the proper time for the PwC's Academy to embark on a major training model transformation. In many aspects, this event was highly insightful, and it contributed to the creation of the necessary urgency to kickstart the launch and sustain the transition process with the right level of inertia. A clear indicator that rethinking the business model was required came from the outcomes of the various event interactions. This provided the Academy with the extra push it needed to get started on the challenging task to fully redesign the working model. Making this decision at this stage of the project and ensuring it resonated well with all levels of management was critical because it assisted in rejecting complacency while also embracing the backing needed to push for significant change.

3.4.4 Collaborative Action Research (CAR) Methodology and the Academy initiatives

This change project centred itself around a methodology of collaborative action research. The aim of this approach was to work together with the team to develop practical solutions for everyday issues, gain knowledge and improve work processes. The research plan for this project included activities from identifying research question to the research design, data collection and evaluation. Both the start and end of the project involved collecting and evaluating team data to enable variance measurement. Individual and team development were also evaluated adopting a reflective approach. Taking a reflective approach enabled me to consider and understand better the changes that had occurred, why they had occurred, and what else could be done to facilitate change at the Academy. As a result, I was able to examine alternative solutions to address problematic situations that arose during project implementation. The outcome of this assessment was needed to corroborate my personal and team learning observations, enabling me to control my personal bias in interpreting project changes. This collaborative approach in conjunction with personal reflection review was one of the most significant ways of building my own personal knowledge.

From a management perspective the data relating to the change management process took a complementary approach where information was collected via surveying tools as well as through one-to-one structured conversations. The data was evaluated to support the project plan design and subsequent implementation. The analysis enabled a comprehensive understanding of the Academy's readiness throughout each phase of the proposed transformation, along with a better comprehension of how the management tiers perceived the difficulties associated with the proposed change.

Taking a collaborative approach that was intrinsically part of the research methodology, including the evaluation of management oversight for this change project, was essential particularly in the context of a firm that is part of a global operation. This tool served also as a pre-validation exercise to run through every stage of change management and determine the areas where major focus was needed to secure a well-managed project rollout. This research approach involved team observation to understand better the work practices of individual and provide feedback to help each employee improve one’s performance and at the same time become more knowledgeable. By observing other's work practices and discussing what I was seeing, enabled team members to gain a deeper understanding of the issues being address through the change and at the same time identify new potential solutions. This ongoing process that was predominantly visible during the implementation stage led to a more effective action plan roll out and better outcomes.

3.5 The importance of technology as an enabler of the project

The design of the digital blueprint following thorough diagnosis of needs and eventual implementation of the Academy's digital learning platform paved the way for subsequent model transformation. The digital platform itself was a research enabler as it enabled introduction of new processes and more precise measurement of the new processes, facilitating the design, refinement, and renewal of every practice. The Academy did not operate an LMS prior to this project and being a new solution required some integration effort to ensure compatibility with the firm's existing IT infrastructure. The blueprint implementation included adaptations to the user interface to optimise the trainee experience.

Integrating the LMS with existing IT infrastructure had to follow the specific arrangements operated by the firm. Setting up the system included the importation of training programmes providing a centralised repository for training materials, ensuring consistent content delivery. The Academy required basic training to start navigating and using the LMS effectively making the transitioning to the new system relatively simple. The implementation included also system configuration that could a accommodate growing numbers of trainees and courses without requiring significant changes. The detailed configuration allowed monitoring of trainee progress, completion rates, and performance, facilitating better oversight and training programme management. Investing in advanced tools and technologies was crucial in encouraging Academy employees to participate in the creation of more streamlined processes and the acquisition of new knowledge.

CHAPTER 4 – Diagnosis and Design Stages: Establishing a new Academy training model

4.1 The diagnostic and design activities chosen for this project

The process of establishing a new Academy training model was developed on both an internal and external analysis that supported the design and planning stage. These two initial stages of the action research process represented two very crucial steps in identifying problems that would need to be addressed. The diagnosis stage was a process that enabled the identification of the new community learning challenges that had emerged over recent years and particularly at the time of investigating and designing this project. As mentioned in Section 3.4.4, a collaborative approach allowed me to investigate how emerging learning needs could be initially qualified and subsequently addressed within the space of this project.

This initial stage of the project included the analysis of the existing Academy arrangement and its respective areas of business. This was achieved partly through desk research supported by data gathering processes. The adoption of an action research approach was crucial in identifying suitable methods that could effectively define the problem to be addressed by this project. It was also for this reason that an effective collaborative approach became a priority for this project, ensure that representative stakeholders' perspectives were weighed up.

The diagnosis stage was critical in order to gain a more comprehensive understanding of the problem to be resolved by this project. Diagnosis involved engaging with all relevant stakeholders and formulating a targeted approach to effectively address the identified needs. This required identifying and actioning methods of gathering relevant data, conducting observations, and engaging with stakeholders to gain a comprehensive understanding of what needed to change. This would enable the definition of a vision that the change project would aim to achieve.

4.1.1. Establishing a starting baseline through project enquiry tools

Establishing a start-of-project baseline through team enquiry was an initial effort needed to gather data and clearly define the starting point for the project. This baseline served as a reference point to track progress, measure success, and guide improvement efforts throughout the project lifecycle. This was done via three interventions which are described below. As shown in Figure 16 below, the project

plan focused on encompassing three primary cohorts in the diagnosis phase, namely trainers, the Academy team, and management.

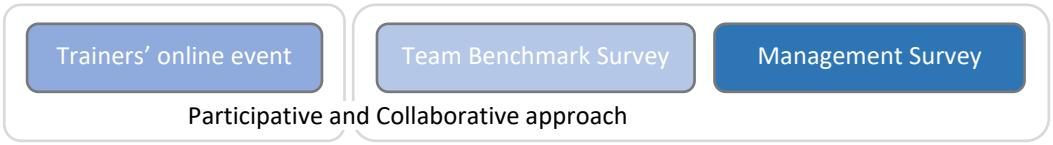

Figure 16 - Engagement with Community, Management & Team

Employing theoretical frameworks to support the tool design of this change project in line with the participative and collaborative approach described in Figure 16, a number of models enabled me to develop a broader understanding, challenging foregone dynamics and concepts. Lewin's Force Field Analysis model, served as a critical lens when developing the community interactive tools. The Force Field Analysis model helped me study community developments taking a different perspective, from the driving forces that brought positive change as well as opposing restraining forces that hindered progress or favoured the status quo. Analysing these opposing forces in a context of a global pandemic when designing interactive tools was central to systematically probe both driving and restraining forces, aiming to uncover insights into what motivates or inhibits certain community behaviours, attitudes and choices.

Lewin's model brought important insight in the preparation and design of large audience interaction used throughout the community event. Determining the key forces influencing the training and learning space helped me understand better how best to position this change project fully aware of the challenges and opportunities as well as discover valuable insights that directly marked the design of this change project. The community event emerged as a significant source to develop further the market forces, informing better the strategic decision-making options at a time of major business instability.

Building also on a literature-based model, another theoretical underpinning that was fundamental to this project was Kotter's 8-step change model, that allowed me to embrace a systematic outline that served as the basis for the development of a management tier analysis tool. Kotter's model provided an established reference framework that allowed me to gauge change management preparedness of the executive cohort. Building on Kotter's model as an established baseline, I was able to design the management tiers survey that warranted a balanced execution across all change stages of this project.

Understanding the Academy team growth and development was a significant element of this change project that I wanted to measure. Developing the tools to measure transformation in team development as a result of the change programme was a process influenced by Kolb's Learning Cycle and Peter Senge's Organisation Design Model. These two models highlighted the importance of continuous learning and adaptation within the Academy team's context. Kolb's model was particularly insightful in relation to the process of learning through the focus on concrete experiences, observation, abstract conceptualisation and hands-on application that encouraged a cycle of individual and collective growth. Similarly, Senge's model underpinned the significance of organisational learning, systems thinking, shared vision, team learning and personal mastery as fundamental components of effective team dynamics. These elements influenced my thinking in relation to the design of team learning tools particularly in the context of a continuous learning setting within the Academy team, enabling me to develop a measurement tool that could establish the initial baseline and the learning maturity gained towards the end of project.

4.2 The Community Event

The community event was designed to provide an opportunity for trainers to come together, interact, and build meaningful connections. Engaging the community collaboratively was a way to nurture a sense of unity and a shared purpose among the trainers' community, strengthening ties at a time when social challenges were intensified by the ongoing pandemic. It was also designed to provide insight and direction into the future of the Academy.

The community event examined the impact of technology from the perspective of individual trainers, considering their personal experiences and how their perceptions had evolved due to external influences. The diagnosis focused on understanding the changes in trainers' work resulting from the adoption of new technology in the learning space, as well as the perception of these changes within the trainers' network.

The analysis explored the driving forces behind the development of training in a digital setting, aiming to determine whether the primary driver for change could be attributed to individual professional development or industry needs. The inquiry focused on identifying the specific technology and digital tools that were being utilised in tandem with new training methods. The investigation encompassed various aspects, such as resource sharing tools, digital workflows, digital communication with peers and trainees, innovative teaching and training methods, and personal digital learning.

The event included an appraisal of the community's perception regarding the key elements necessary to facilitate future development and integration of digital technologies in the learning and training domain. These elements encompassed various factors, such as the adequacy of training methods available for trainers, the availability of appropriate technology and tools and resources and having an effective training model that encourages innovation, motivates trainers to continuously change and adapt, and provides new forms of measurement to support decision-making processes. By embracing all key cohorts, this event had a significant impact on this change project. The information gained provided valuable insights, creating new opportunities for the project.

The event was structured as a national-level webinar named 'Transforming Education for the 21st Century' was open to all trainers and tutors. This participatory learner event placed an emphasis on community engagement and explored aspects of the potential and extent of the use of technology in training and learning. The session brought together just over 2,600 trainers and aimed to examine how learning approaches and perceptions have evolved in recent years, particularly in the months preceding the event. Leveraging the established network of local registered trainers, the event

attracted an important number of participants with more than a third of registered trainers and educators joining the session. The event was headlined by PwC in collaboration with Microsoft and brought together a line-up of high-profile policy owners, international experts and speakers with varied educational experience, research specialisation and professional backgrounds.

Participants in the event had the opportunity to share and discuss the changes in learning practices and emerging perspectives. The event created an inclusive environment that was conducive to exploring further the integration of technology in training and learning. The event was an opportunity to gain comprehensive understanding of the state of trainers at the start of the project and identified evolving needs and aspirations. It is worth noting that the event coincided with the first months of global spread of the SARS-CoV-2 pandemic, which disrupted traditional training and learning methods in an unprecedented manner.

Throughout the event, a carefully curated series of interactive questions utilising the PwC digital platforms were embedded into the agenda. The questions served a dual purpose: engaging the trainer audience to promote two-way information sharing and secondly, a structured way of collecting information instantly on the perspective and needs of the trainer community. The questions posed to the audience encompassed various aspects such as trainers' oversight, individual and professional development, the utilisation of technology and tools, and the future of digital in training. The survey questions were purposefully spread throughout the event, fully leveraging interactive quiz formats. Each query employed a different mode of retrieving information from ranking methods and thought-provoking prioritisation elements. As questions were progressively unveiled, and each interaction was anticipated by a relevant dialogue that facilitated comprehension and interpretation of each inquiry thematic. Unlike traditional surveys, where the analysis of replies typically occurs at a deferred instance, the digital interactions during the session provided an alternative prospect. With the aggregate results and outcomes shared with the audience immediately after the time of each query elapsed, there was also a direct follow-up by engaging expert panels to promptly discuss the outcomes.

The quantitative measurement obtained throughout the event carried two notable benefits. Firstly, the data and insights collected were highly representative of the entire trainer population. Secondly, the data collection process was immediate, enabling the sharing of aggregated information with all participants, thereby developing further discussions on the outcomes. The data and related analysis resulting from the interactions during the community event are presented in the subsequent Sections 4.2.1 to 4.2.4.

In addition to the qualitative data collected, the expert panel discussions encompassed a wide range of subjects including the synchronisation of digital information, online communication, trainee-to-trainer ratios, online assessment tools, training methods, pacing, and feedback provision. The widespread integration of digital technology in the training and education sphere not only broadened the possibilities and opportunities for training but also carried profound implications for the future of the profession.

Analysing thematically the discussions during the event, the following interconnected points influenced the design of the new Academy project model.

- The modern landscape of education and training requires a continuously agile and dynamic perspective.
- Advancements in technology have revolutionised the way we learn and work, requiring individuals to acquire digital literacy and technology skills to navigate this digital era.
- The job market is constantly evolving, demanding new skills and competencies to stay relevant making learning more essential to secure a healthy thriving society.
- Learners today have higher expectations, seeking personalised and adaptive learning experiences tailored to their needs.
- With the rise of remote and virtual learning, the accessibility and flexibility of learning have greatly expanded.
- Soft skills have become increasingly important, complementing technical expertise in the workplace.
- Continuous learning, upskilling, and reskilling have become essential for individuals to adapt to changing industry demands.
- Additionally, data literacy and analytics have gained prominence, enabling organisations to make data-driven decisions and leverage insights for improved performance.

These points fed into the project design discussed later on in this chapter, adding to the four quantitative surveys that featured multi-purpose survey question attributes designed to elicit multiple kinds of information from the respondent with a single query through layered insights and contextual thoughtfulness, which survey questions will be now discussed.

4.2.1 Analysing the potential use of technology in learning and training

The initial interaction during the webinar aimed to assess the participants' perceptions regarding the potential widespread use of technology in training and education, from their own perspective and involvement. Each respondent independently rated each scenario presented by this interaction. The results, depicted in Figure 17, indicated that two thirds of participants perceived a substantial shift in the potential utilisation of technology within their immediate professional contexts and the broader training and education landscape.

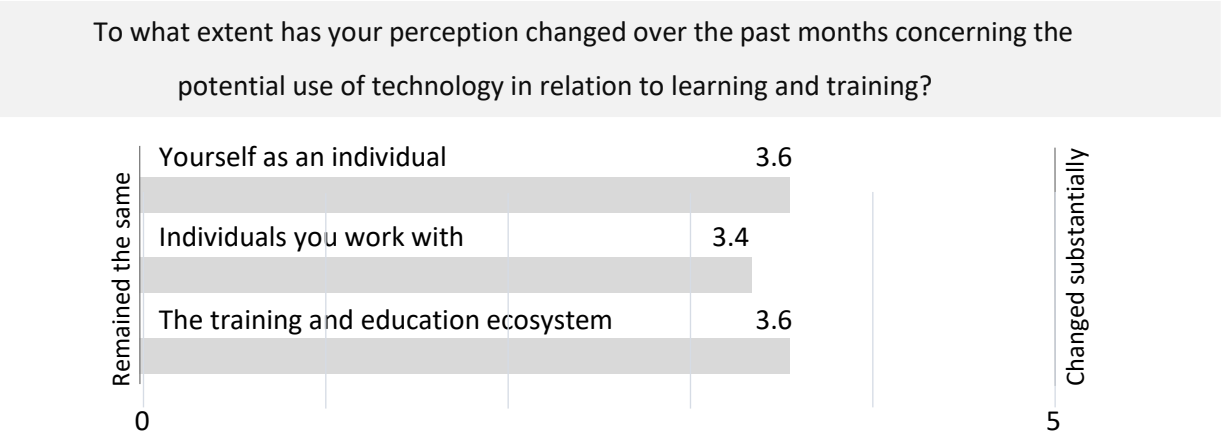

Figure 17 -

Technological growth and development pervade all walks of life is accelerating – a key question in reviewing a learning and training model is to understand and predict such changes. The experts on the panel highlighted that the context of the global pandemic accelerated the adoption of technology in learning and training, pushing educators, trainers, and learners to welcome digital tools and platforms. The sudden shift to remote and online learning necessitated the use of technology for communication, content delivery, collaboration, as well as assessment. The widespread adoption of new interactive platforms in learning and training brought forward benefits and new challenges. These benefits included enhancing trainee accessibility, flexibility and for some also the opportunity to build more personalised learning experiences. Digital tools allowed for interactive and engaging learning materials, adaptive learning pathways, and real-time feedback.

The interpretation of participating experts suggested that new digital context forced individuals who were initially hesitant or sceptical about the use of technology in training to reconsider their perspectives. As remote learning became the norm, the practicality and effectiveness of some digital tools became evident, leading to a shift in perception and a greater openness to integrating technology in learning and training. The audience also highlighted the total reliance on digital capability to sustain remote collaboration and communication. Such ability was not only a skill that

was required in the training context, but often a reality within the work context. Video conferencing, online collaboration platforms, and virtual classrooms became essential tools for connecting learners, trainers, and experts across different locations. Technology allowed for more engaging and interactive experiences in learning and training, particularly with the inclusion of multimedia elements, gamification, virtual simulations, and with the potential of future augmented reality/virtual reality (AR/VR) opportunities enriched the learning process, making it more immersive and stimulating to a more diversely capable trainee audience.

In relation to the diversity of the trainee audience, the importance of addressing the digital divide and ensuring equitable access to technology for all learners was also deemed high importance. The need for remote learning shed light on disparities in internet access, device availability, as well as digital literacy skills. This recognition assumed added importance in the learning space with trainers needing to increase efforts to bridge these gaps and provide equal opportunities for all learners.

4.2.2 Analysing individual and industry needs in training

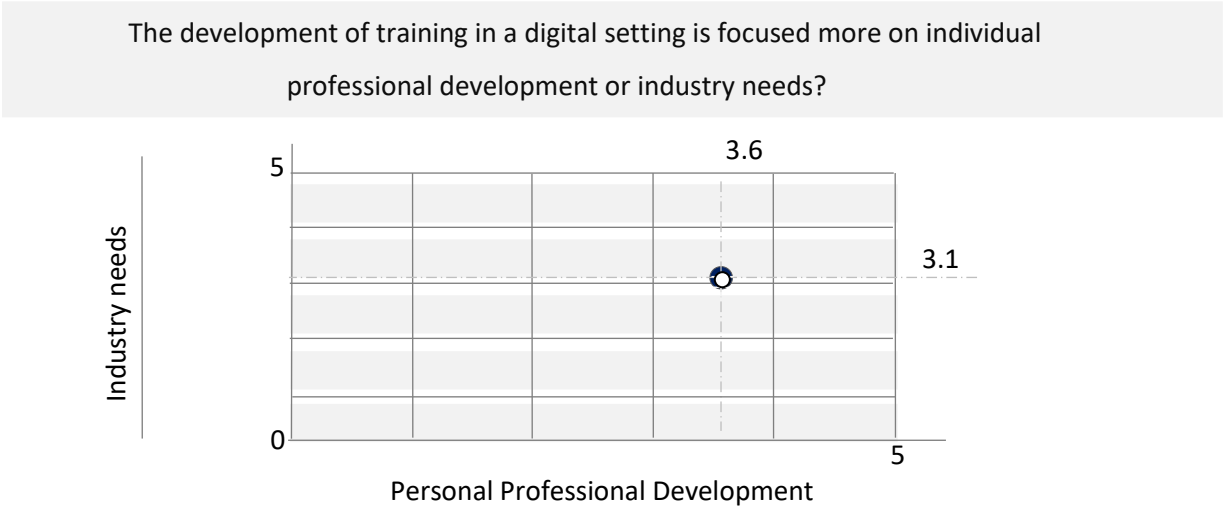

Figure 18 - Individual vs Professional Development

The second interaction engaged participants with an interactive question that aimed to establish whether the shift towards digital training was primarily driven by individual trainee demand or industry needs (Figure 18). The results indicated a two thirds inclination towards an individual driven training.

In discussion it emerged that several key factors that contributed to this outcome including an enhanced potential for personalised training experiences, a greater willingness among trainees to

embrace digital learning methods, the wide array of online tools accessible through established platforms, the abundance of community resources, and the wealth of information found in the online digital space, which stemmed from increased collaboration between training organisations. Evaluating the responses and the dialogue that ensued, the elements that determine training needs that can be influenced by both individual professional development and industry needs included the following considerations.

Individuals actively look for development opportunities that align with their personal interests or areas identified for improvement, often utilising self-assessment options to gain insights into their strengths and weaknesses. The growing inclination towards prioritising individual professional development, driven by individuals' heightened awareness of their own skills and competency gaps is becoming more evident for specialist roles. Individual development plans play a pivotal role in identifying specific training needs in terms of personal growth. Additionally, individuals with clear career goals and aspirations actively pursue targeted training programs to help them advance along their desired career path.

However, industry-led progress frequently correlates with market needs, necessitating focused training programs to meet specific skill and competency demands. This connection between industry and training initiatives often aligns with industry requirements. This aspect is essential to sustain business in adapting to a rapidly changing landscape influenced by technological advancements and industry trends. As job roles evolve, training becomes necessary to equip employees with the essential skills and knowledge required to assume new responsibilities. Additionally, industry-specific regulations and compliance standards often mandate training to ensure that employees can fulfil legal and ethical obligations effectively. Another consideration that was brought up related to the alignment of training needs with organisational goals and strategies to ensure that every workforce is equipped to support the overall objectives of the organisation. The contributions made by the audience and the experts highlighted clearly that training needs are often a combination of both individual and industry requirements, entailing often a comprehensive analysis considering both perspectives to develop a well-rounded training program.

4.2.3 Analysing the future technology and tools in training

Which technology or tools would you like to incorporate in your training methods?

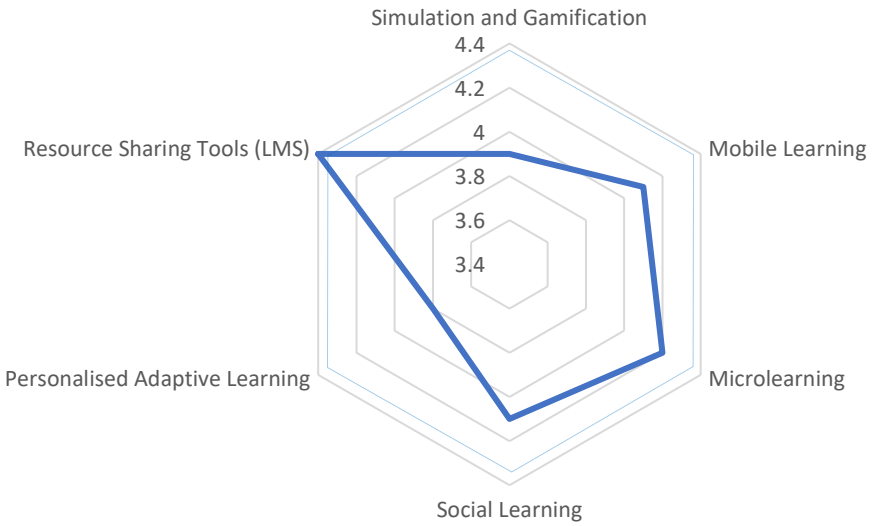

Figure 19 - Technology and tools in new training methods

Each trainer at the event had to a different degree connected with technology experts who supported new training methods through extensive knowledge of digital tools. As presented in Figure 19, trainers at the event ranked highest all the features of digital learning and resource sharing tools. The subsequent discussion that unfolded made it increasingly clear that trainers and educators resonated most easily and naturally with the concept of sharing information and tools. Collaboration and sharing among trainers and educators have always been critical features of successful training environments. With the introduction of learning platforms, trainers benefitted from a number of centralised digital spaces that hosted more organised training materials, enabling them to create, manage, and deliver learning content more efficiently through increased collaboration.

The audience also demonstrated a strong affinity for the three areas relating to microlearning, mobile learning, and social learning. These concepts of learning have been significantly facilitated by the increased digitisation. Trainers acknowledged the effectiveness of microlearning in breaking down training content into easily digestible, bite-sized modules or sessions. This approach is believed to cater better for learners' having a shorter attention span allowing them to learn at brief intervals, thereby improving retention and the application of knowledge. The prevalence of smartphones and tablets has greatly contributed to the increased popularity of mobile learning, making training materials accessible on these devices, and enabling learners to engage in self-paced learning. Furthermore, trainers recognised the value of social learning in developing collaboration and knowledge sharing amongst learners. Online discussion forums, social media groups, and virtual

communities create important opportunities for interaction, questions, and learning from each other's experiences.

In comparison to the previously mentioned themes, personalised adaptive learning, simulation and gamification received a lower importance rating from the audience of trainers. This outcome could be attributed to the novelty of these concepts for many trainers present at the event. While they had heard of these learning approaches, they were still in the process of familiarising themselves with the more widely used and fundamental tools and concepts of digital learning.

4.2.4 Analysing future enablement of digital technologies in learning and training

The fourth and last interaction presented during the community event was a ranking interactive question that listed principal elements for the future development and integration of digital technologies in the learning and training domain (Figure 20). The results clearly indicated that the majority of trainers present consider that providing adequate guidance on use of digital techniques to trainers as the most important consideration. Leveraging technologies was a primary priority for trainers enabling them to elevate the quality of their preparation and delivery.

Despite the assumption that younger generations are more adept at using technology, trainers at all ages often find themselves investing additional effort to adapt their instruction methods to be both effective and engaging for respective learners. The audience and experts argued that embracing a new

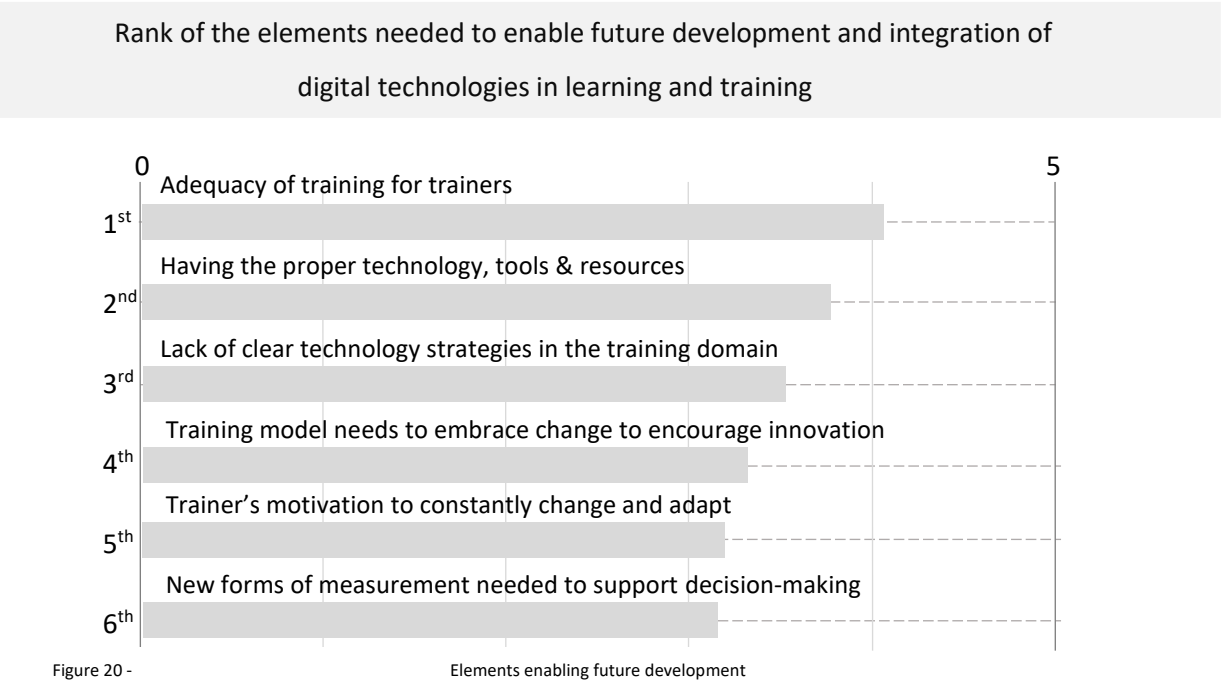

Figure 20 - Elements enabling future development

mindset is necessary to develop training innovation that harnesses the potential of recent technologies, even as a blended approach continues to yield interesting results.

In addition to the need to provide training to trainers, participants identified a properly designed infrastructure, technology platforms, tools, and resources as the second most crucial factor. Only with a robust infrastructure and technological backbone can the necessary level of interactivity and performance be supported, leading to the delivery of high-quality training. Furthermore, participants emphasised the importance of defined training and education technology plans that establish a cohesive digital training approach. Such plans facilitate the establishment and consolidation of national-scale quality standards based on shared best practice. The participants proposed a digital training approach that combines programmed design changes to stimulate continuous innovation as the next most significant feature.

4.3 The Vision for Change

The community event and the knowledge gained by the Academy over the past years contributed towards the development of the new Academy vision. The new vision pursued by this project aimed at inspiring excellence, inclusivity and learning innovation. The new vision aimed to inspire lifelong learning and professional growth supporting individuals and corporates to strive for the highest standards. The new vision aimed also to drive and prioritise forward-thinking in digital instruction and training methods, that in line with the main principles of the firm would sustain a diverse and inclusive learning environment. One of the principal objectives of the new vision is that to prepare learners to make a positive contribution towards their respective organisations by helping them attain the skills and knowledge needed to lead and succeed. Additionally, the vision aimed at promoting interdisciplinary learning that allows for sustainable personal and professional growth. The new vision aimed also to meet the highest ethical and quality standards in the learning and development space.

Together with the management team the new vision was consistently communicated to the all the Academy team. The vision for change was given due importance and shared during team events but also as part of the transformation meetings that were established on a weekly basis. The management team agreed to tie the vision to all aspects of operations from individual training and coaching to performance management reviews. Every effort done considered pointed back to the newly instituted Academy vision. The plan to deliver the vision was designed by establishing the key building blocks, identifying short-term wins and removing barriers to transformation. By the end of the project the transformation in line with this vision would have:

- Introduced an LMS to sustain the digital learning setting
- Created an inclusive user experience for all trainees following training programmes
- Provided personalised approach to trainee development by leveraging data
- Transformed all training programmes to meet the new digital learning standards
- Automated most of the administrative processes supporting a self-service approach
- Embedded quality checkpoints in accordance with the internal quality framework

4.4 Analysis of the management perspective in a structured change approach

4.4.1 The Management Survey

The Management survey was designed to assist in making the change process maximally effective. It served as a systematic tool for diagnosing the perspectives of the three management tiers in the firm. The three tiers included the Academy Committee, Senior Management and the Academy Managers (refer to Section 1.3 – Figure 2). I designed the survey used to explore the state of management readiness to follow a structured and controlled change approach. The survey questions were categorised following the areas of organisational change in line with John P. Kotter's (2012) eight-step approach. The questionnaire was distributed early at design stage and following the collecting of responses, a structured discussion followed with each member across all management levels to gather additional insights about the change.

By developing this questionnaire and engaging with these areas of change management, any disparity of perspectives between the different tiers of management could be identified. This diagnosis and the analysis to follow facilitated effective management coordination throughout the planning and implementation of the change journey.

4.4.2 Detailed design of the questionnaire

Leading the Academy business is the Academy Management Committee. The Committee is composed of 14 individuals, including the Territory Senior Partner and seven partners responsible for various business lines including assurance, client services, business transformation, risk, and the Academy. The remaining 6 members are senior managers from various business segments within the firm, covering areas such as client experience, accounting, assurance, data management, and two representatives from the Academy, including myself.

After formally presenting the project vision and objectives to the Academy Management Committee, the management survey was digitally distributed to all Committee members. The survey conducted among the Academy management aimed to assess their sense of urgency towards the project's goals and the potential benefits of a digitally enabled future state. It had a key objective of assessing management's comprehension of the new change vision and its effectiveness in addressing employee's concerns and anxieties, thus developing transparency and trust. It sought to understand management's perspective on the clarity and definition of a shared strategy and the Academy's capability to exemplify a leadership role in the transformative project. The input from management

at all tiers contributed to determining their confidence in the Academy's ability to deliver this project and meet established milestones.

Engaging with all tiers of management through this questionnaire, enabled me to develop a comprehensive implementation strategy for this project. This approach enabled me to explore the level of preparedness and significance of each stage in greater detail. Although Prof. John Kotter's 8-stage model is widely acknowledged for organisational change, the approach I adopted sought to address certain limitations encountered, which limitations are discussed in Chapter 6.

Analysing the management feedback was key to the detailed planning of the activities to be actioned along the change project. The management questionnaire instigated open conversations that helped identify potential training scenarios outlining what could be the future of learning and associated opportunities. Exploring learning opportunities provided the Academy management with convincing reasons to get the whole Academy team discussing and thinking about change.

4.4.2.1 The Design of the Survey

The survey I purposely designed to formulate a clear view of the change elements from a management perspective. Three statements were developed for each of the eight steps as detailed below.

Create a Sense of Urgency: This aspect looked into the compelling reasons for needed change in the business model, emphasising the need for immediate action and creating the right level of urgency among team members.

STEP 1	A1.	The Academy is able to create a sense of urgency so that all stakeholders understand the need to act at the present moment.
	A2.	The Academy highlights the goals to be achieved and reveal how the goals will benefit the organisation in a digitally-enabled future state.
	A3.	The Academy takes the right steps to motivate its workforce to buy into change.

Table 4A -Create a sense of urgency

Establish a Guiding Coalition: Identifying a diverse and selected group of leaders who could support and drive the change project, building a strong team for change. This concept was embraced and implemented for this change project.

STEP 2	B1.	The Academy is supported by a group of key people that buy into change in a fairly strong way.
	B2.	The Academy has the support of a broader coalition from within the rest of the firm.
	B3.	The leaders championing change are strong ambassadors of change management initiatives.

Table 4B – Establish a Guiding Coalition

Formulate a Vision and Action Plan: Developing a clear vision for the future Academy and an action plan that outlines the steps necessary to deliver the vision.

STEP 3	C1.	The Academy's strategy is effectively communicated with the rest of the firm.
	C2.	The Academy's approved strategy is defined in a clear and concise way.
	C3.	The strategic vision brings together a series of activities enabling the Academy to meet a number of milestones that together direct the organisation towards the established end goal.

Table 4C – Formulate a vision and action plan

Communicate the Vision: Effectively communicating the vision and strategic plan to stakeholders, ensuring understanding, buy-in, and alignment throughout the Academy and the firm.

STEP 4	D1.	The Academy leadership team is enabled to communicate the strategy and initiatives broadly and effectively through the existing structures.
	D2.	The communication plan goals are clearly understood and gain broad buy-in in terms of ideas and concepts.
	D3.	The communication plan helps to enlist people to support transforming the changes into action.

Table 4D – Communicate the vision

Empower Action: Removing barriers and empower employees to take action that is aligned with the vision, encouraging risk-taking, and innovative thinking.

STEP 5	E1.	The Academy works actively to retain momentum when obstacles are encountered.
	E2.	Key individuals across the firm are effectively engaged for the Academy to achieve its goals and objectives.
	E3.	The Academy effectively addresses obstacles that may impede progress and business change.

Table 4E – Empower action

Identify Short-Term Wins: Communicating and sustaining short-term wins and successes to support team momentum and demonstrate the positive impact of the change project.

STEP 6	F1.	The Academy effectively looks for short-term wins along the way.
	F2.	Sustained progress and frequent success are essential elements to motivate the whole Academy team.
	F3.	The successful completion of small initiatives combined together are important for the Academy to reach its end goals.

Table 4F – Identify short-term wins

Consolidate Gains and Introduce further Change: Building momentum around the initial activities and continuously reinforcing the change effort along the project.

STEP 7	G1.	Beyond any short-term wins, the Academy's real goal is continuous and sustained progress towards its longer-term objectives.
	G2.	The Academy is capable of staying focused on securing repeated wins along the way.
	G3.	Wins registered are evaluated for lessons-learnt to progressively enhance the processes through continuous and incremental change.

Table 4G - Consolidate Gains and Introduce further Change

Anchor the Changes in the Culture: Embedding the new business model into the Academy's culture by aligning systems and processes with the new vision, model and the quality system.

STEP 8	H1.	The Academy makes it a point to anchor the change experience within its organisational culture.
	H2.	The Academy makes continuous efforts to ensure that change is accepted and viewed as an opportunity throughout the firm.
	H3.	The approach adopted by the Academy helps making new strategic initiatives easier to achieve through the creation of a more agile organisation.

Table 4H – Anchor the changes in the culture

The same set of questions were applied across all three tiers of management including executive management, senior management, and the manager tier. Outcomes from this survey enabled me to

analyse the management team's understanding of the elements contained in this change approach. Management dialogue delved deeper as the responses were reviewed against the outcome of their peers. Figure 31 provides a segment-based overview of the outcomes from the survey.

The results of the management questionnaire informed which aspects of change management in which the Academy was well placed and which other areas required a greater focus to ensure a timely and successful project outcome. It was critical to align this review with the project plan to structure the changes in a way to achieve success. Given the limited number of training organisations that shared a similar profile to that of the PwC's Academy that could serve as a reference point, this management approach became necessary for the project. Questions posed were assigned a point value to every individual answer option to enable comparison and analysis. The aggregate scores for each group of questions provided an indicator of management alignment of otherwise. Although the hierarchical setup and direct reporting lines are not as vital on a regular everyday basis in a structure such as the PwC's Academy, the accountability and duty of each role needs to be maintained for a multi-national firm to function well. I also became more aware that different levels of responsibility would have different points of view at every juncture of the change process that needed to be taken into consideration. The strategy design became even more important considering the state of instability that the training market was undergoing at the time of running these questionnaires as a result of the global spread of the SARS-CoV-2 virus infection.

4.4.3 An analysis of data gathered

Using a scale of 1 to 5 for scoring the results, depicted in Figure 21, bring to the fore and underscore two main observations. Firstly, the diverse ratings of the management tiers with respect to key aspects of the change management project and secondly, a comparative analysis across the eight domains of change identify areas that require the most focus. The shaded segments denote the areas where assurance and readiness were high as opposed to other areas where greater emphasis would be needed to implement the change in a successful manner.

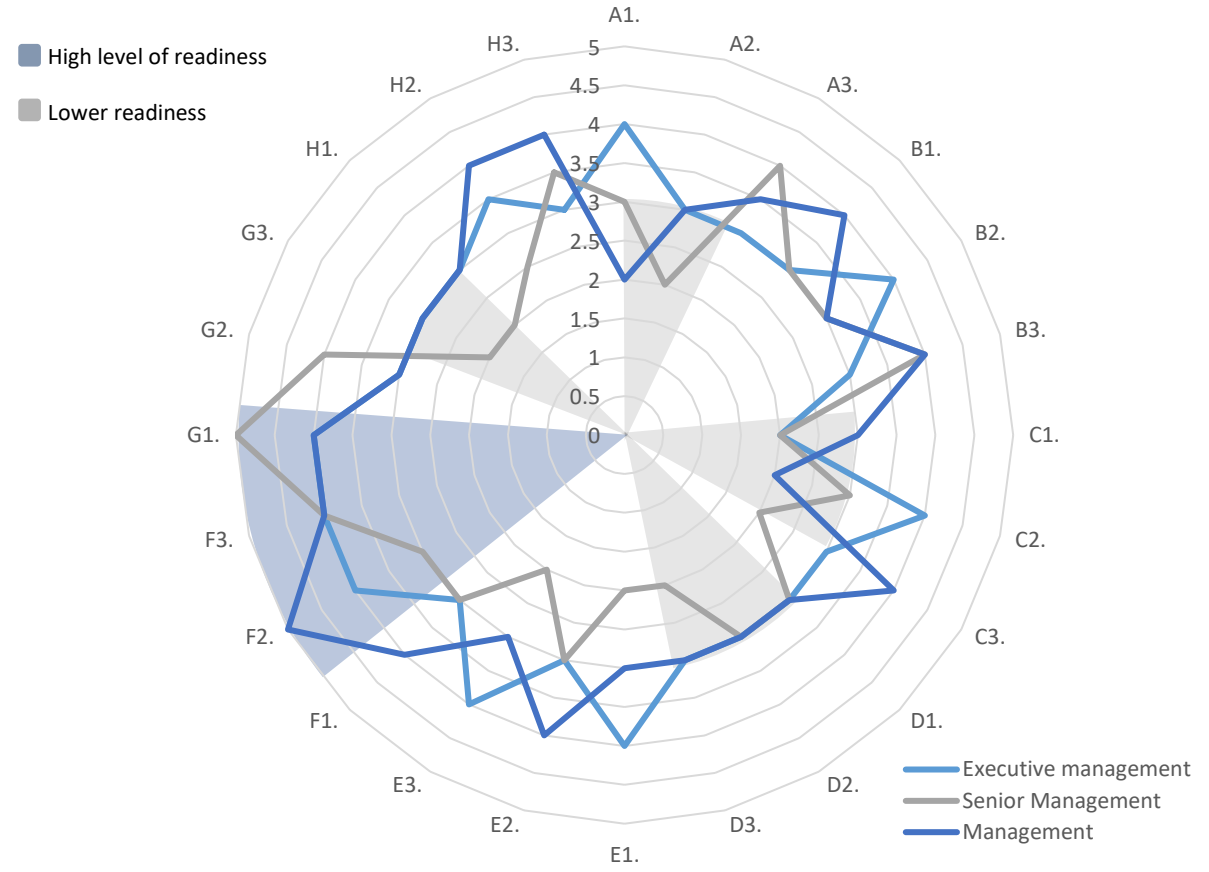

Figure 21 Tool based on John P. Kotter (2012) 8-Stage framework

4.4.3.1 - Creating a sense of urgency

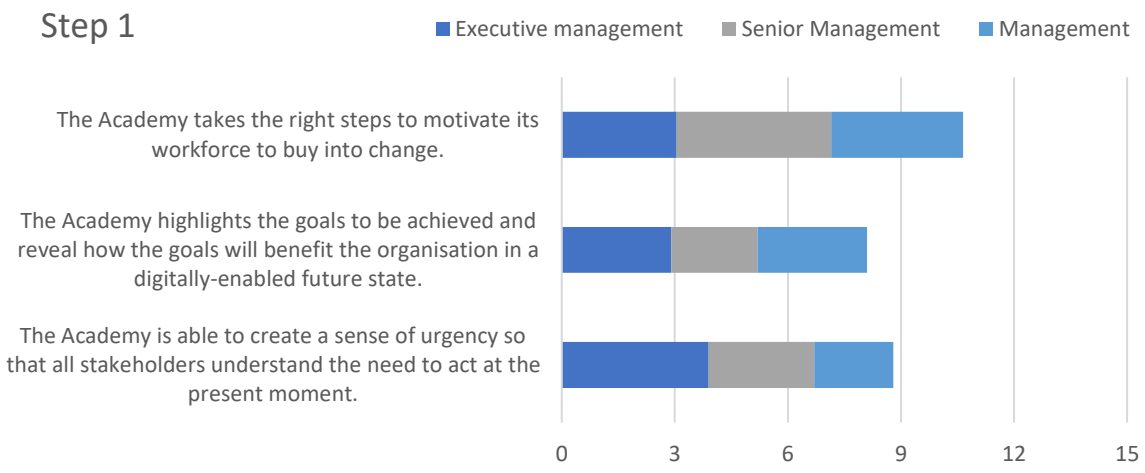

Figure 22 - Create a sense of urgency

The executive team and senior management were confident that the Academy would instil a sense of urgency based on a thorough understanding of how the training environment was evolving, and that this would provide the motivation for the change project to move forward as planned. The project managers recorded a positive yet less optimistic rating, with some significant obstacles needing to be overcome to see this project through to completion. It was noticed that employee motivation was considered high indicating that the team was eager to engage with this change project. The feeling of urgency assisted in the development for a bias-for-action inside the managerial hierarchy. As a result of the pandemic state, the initial measures that could have been implemented within the short to medium term would take centre stage. At the early stage of needing to secure the appropriate sponsors across the whole firm including complementary areas of business and management buy-in, the environment for change was just right.

4.4.3.2 - Establish a Guiding Coalition

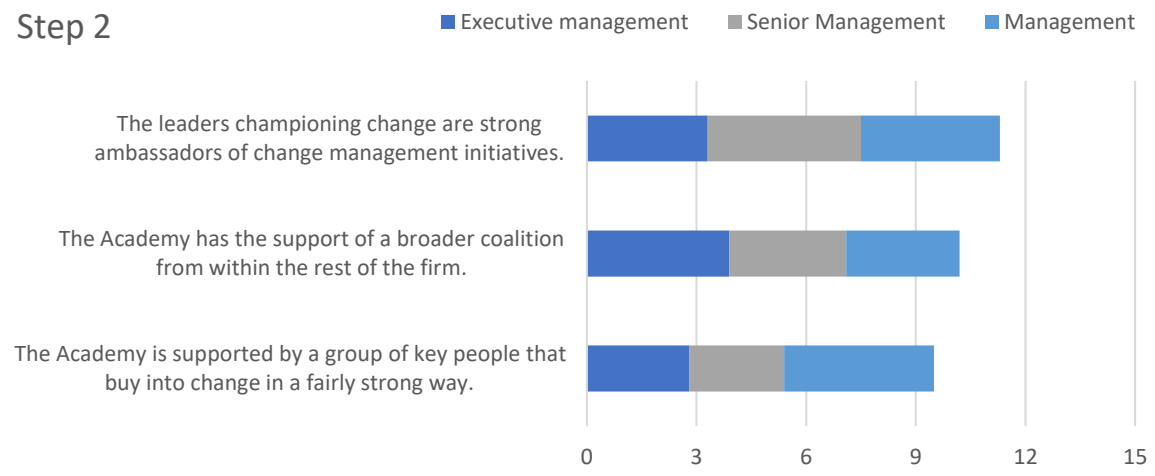

Figure 23 - Establish a Guiding Coalition

In line with the responses to the question, there was tacit agreement within the management function that the PwC Academy could rely on clearly identifiable professionals that could support this change initiative in a coalition setting. Clearly, based on the results of the scoring, management considered that the coalition members could be easily identified, from a reliable cohort of professionals who had earned credibility not only within the Academy team but also across the firm. The responses indicate also that the management members had a high level of confidence in individuals involved in managing the business areas within the Academy considering them to be highly influential in their respective domains. The project coalition, as well as all PwC Academy employees, would need to approach this change project with a strong positive attitude. Management recognised that the efforts required to change the training model at the Academy was well distributed across all its stakeholders, which they considered to be a positive development. Management members were aware that taking a simplistic

approach would impinge on the successful implementation and that the absence of a strong coalition the project's chances of success could be decreased. The commitment taken by management members was to be present and support the project leader and the guiding coalition for the duration of the project.

The management team recognised the importance of the contribution by primary stakeholders. The team was encouraged to collaborate while also ensuring that it had the necessary authority to effect change. The guiding coalition secured the right sponsors across the firm sustained by the necessary resources to continue the transformation endeavour and keep it on track throughout the various stages of the project. As a member of senior management and project leader, it was also my responsibility to make certain that the guiding coalition members and the Academy team were encouraged and supported. Following this approach, it was possible to ensure that change was driven consistently at the lower and mid-tier levels of the Academy. The guiding coalition comprised an appropriate mix of profiles to ensure quick decision-making, the appropriate level of competence and dependability. With the support of the guiding coalition, the Academy could look more positively towards long-term viability of this change in business model.

4.4.3.3 - Formulate a Vision and Action Plan

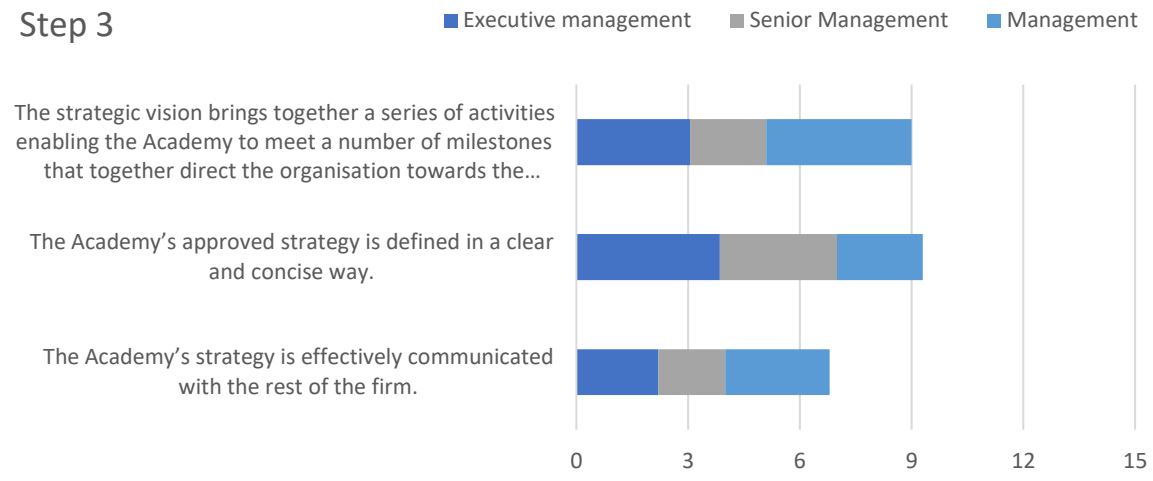

Figure 24 - Formulate a Vision and Action Plan

Analysing the third domain of the framework was most critical given that it had attracted the lowest aggregate rating of all the eight domains within this questionnaire. This outcome could be largely attributed to hesitancy brought about by the difficult moment surrounding the training environment at community level. Senior management made a deliberate decision to rate conservatively as was also evident in the scoring across all management tiers. The primary cause for this outcome can be traced

back to the volatile market conditions that were aggravated by the global pandemic. The situation that became a new reality abruptly called into question many established methods and strategies across the market that was now largely influenced by the unknown. The lower rating begged for more effort needed to ensure that the change process would be adequately addressed in this regard. This expressed concern was valid, and it could only be alleviated by ensuring that the change initiatives would be completely aligned with the renewed Academy vision, aligning the team towards the same end goal. As part of this transition, the vision needed to provide the right level of assurance that the Academy would be able to turn the current market situation into an opportunity. This was particularly important in the context of an increasingly fast-moving digital market.

The new vision encompassed the procedures in use at the Academy, the team of professionals involved, and, perhaps most significantly, the technological side. Even though the transformation would affect all areas of service delivery: accounting, business and technology it was the latter that served as the foundation for the project, around which new skills and procedures needed to be established. While developing this new model, together with the guiding coalition, the focus was on clarity to enable communication across the team and other members of the firm.

4.4.3.4 - Communicating the vision

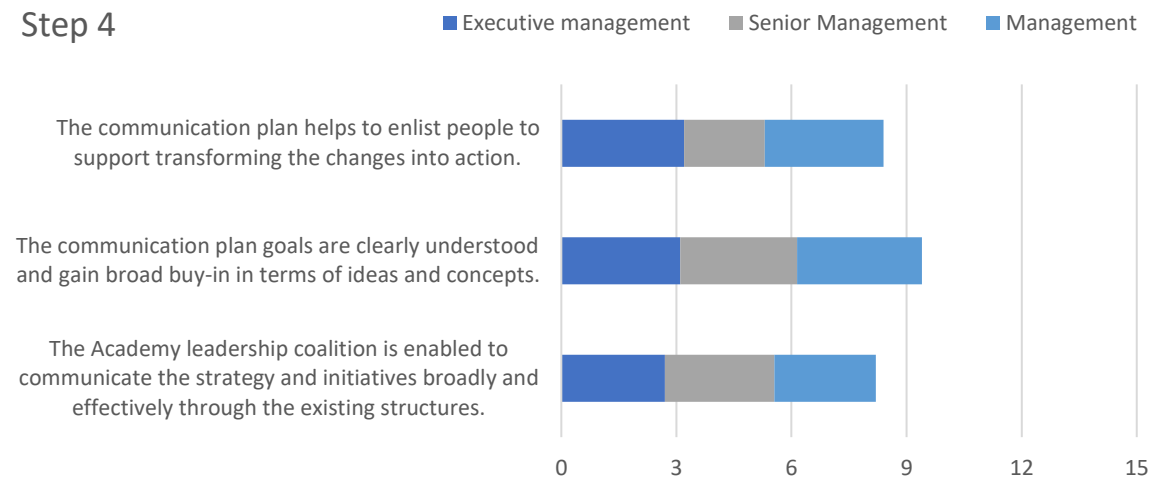

Figure 25 - Communicating the vision

The analysis of the fourth domain of the framework was heavily dependent on the outcome previous area, specifically the formation of an apt vision for this change project. Evaluating this domain's scoring in the questionnaire, highlights the aspect of business ambiguity that reflects the market uncertainty, with the second lowest total rating following that of the previous domain. Senior management in particular, scored low possibly due to intertwined everyday activities connecting

communication and vision. Maintaining control over the communication of the project's vision for change was critical to secure the commitment and support of the whole team. Developing team consensus require consistent communication throughout the project. Management's leadership role in promoting and maintaining new behaviours was a key motivating factor for the team. The measures taken by management in respect of this change project sent out a strong and compelling message to all members of the Academy.

The need for simplifying the communication of the new vision needed to be emphasised, selecting messages that were simple and free of technical terms to achieve this goal. Individual confidence and uncertainty are increased when messages get delivered in a clear and concise manner. To counteract anticipated difficulties, the vision was marketed in emails to the team, discussed during meetings, embedded in presentations, embedded in internal firm communications, as well as through internal training programmes. Hearing about the new vision on a regular basis helped the Academy team to embrace the concept. The increased use of reinforcing messages by all levels of management contributed also to the achievement of continuous engagement from the entire team.

4.4.3.5 - Empowering others to act on the vision

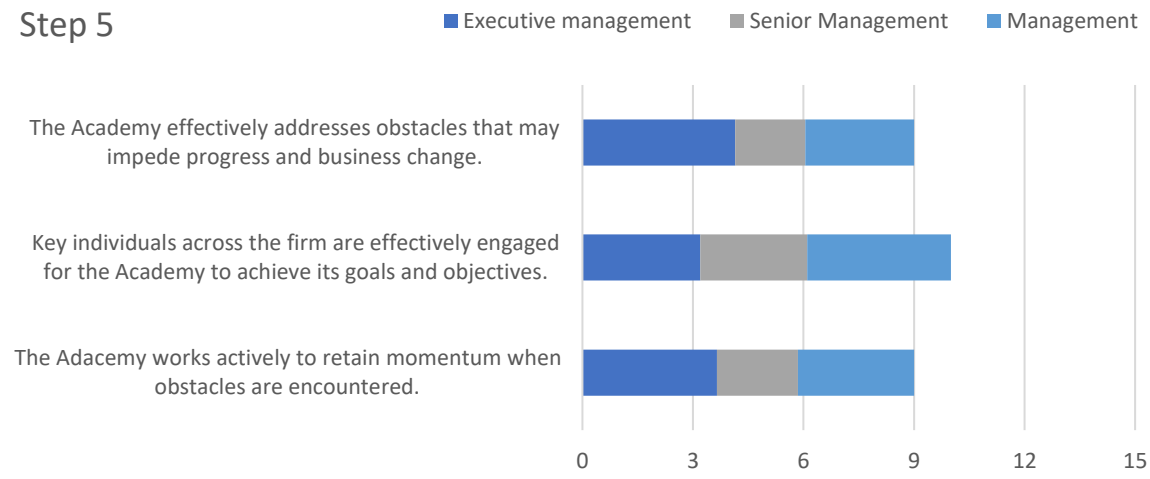

Figure 26 - Empowering others to act on the vision

The different management tiers scored differently to the questionnaire when asked about this fifth step of the transformation project. When compared to the management and executive management evaluations, the senior manager role considered dealing with change obstacles as being substantially more complex. The reason for this variance relates to the Senior Manager role across the firm being the one responsible for addressing organisational business gaps. Notwithstanding that the existing Academy structure could handle most of the processes and procedures added as part of the new working model, one of the shared concerns was whether the existing structure would support the new

business model. The feedback received, reiterated by all tiers of management, was that there was an element of concern linked to the substantial disruption that the Academy would need to face in a relatively short time. The concern related to the transformation challenges beyond the Academy's control that if not addressed, over time could lead team members to start giving up on the project.

The introduction of new technologies was a critical supporting act that permitted the development of new Academy procedures and methods of working within the newly adopted vision. Change is never easy, and management emphasised the importance of efficient administration of the change.

4.4.3.6 - Planning for and creating short-term wins

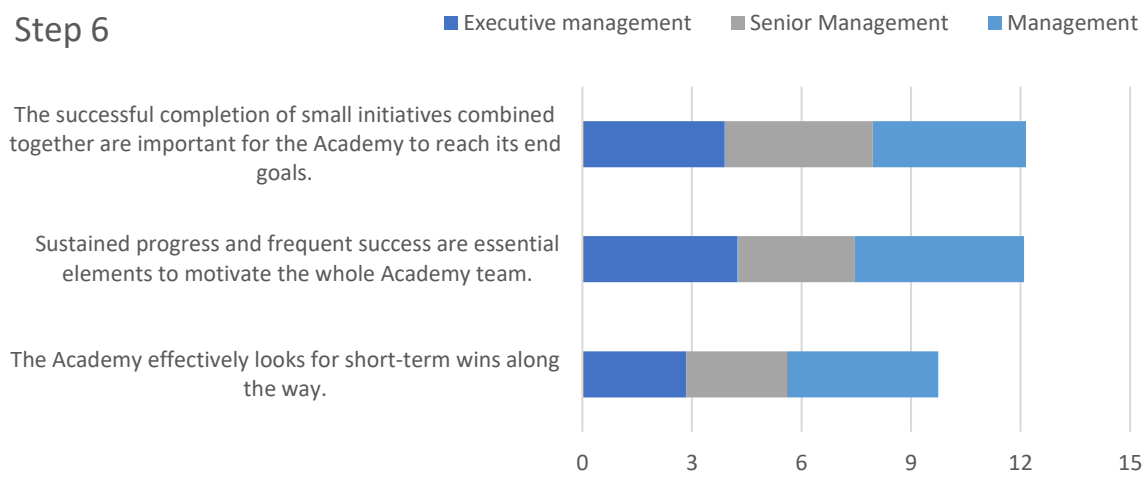

Figure 27 - Planning for and creating short term wins

The highest aggregate score in this domain indicated that the management team was fully confident in the good state of preparation to initiate the project implementation. At the time of completing the questionnaire a draft project plan was made available, which plan was firmed up at design stage. Another positive aspect was that management ratings were consistent, registering important scores across tiers. The Academy team's determination to overcome the constraints imposed by the global SARS-CoV-2 outbreak on all of its existing training programmes contributed to management's confidence in attaining short-term successes. Identifying the team's short-term objectives, which represented an important test for all the team, a number of employees took advantage of the opportunity to step outside their comfort zone to explore elements of the new training dimension. Management made specific plans for how this change project would transition the Academy's classroom-based training into the online setting in a regulated and managed setting in order to produce proven performance benefits.

Management recognised that it was critical to identify short-term wins that could be completed fast, however, it was also aware that was still a long way to go in terms of this transformation process for change to be delivered successfully. It was critical to maintain momentum and accelerate growth. Most of the initiatives had clear visible outcomes to all Academy members, raising the bar in terms of interest and resulting in a united effort to achieve new goals.

4.4.3.7 - Consolidating improvements and producing more change

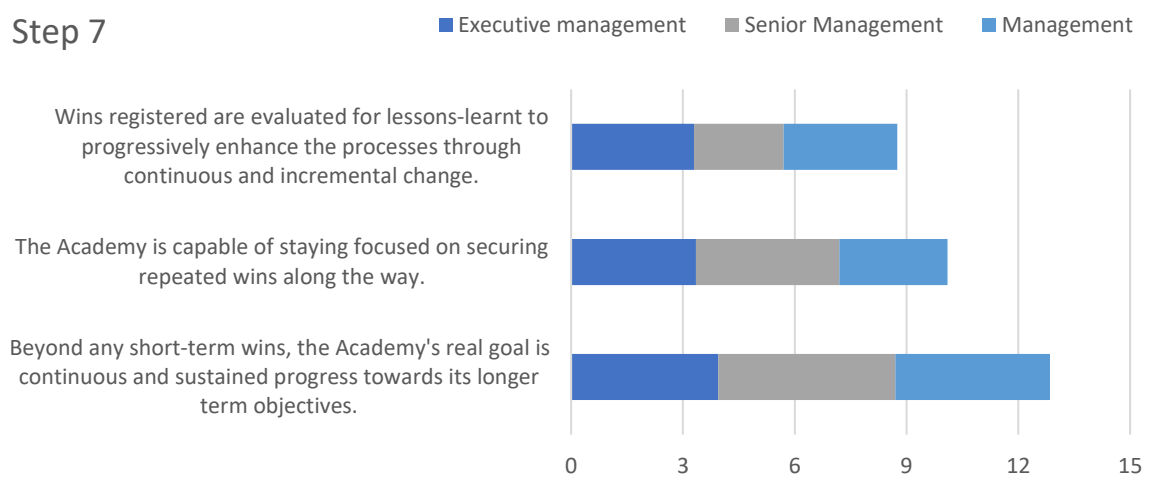

Figure 28 - Consolidating improvements and producing more change

Building on the previous domain, short-term wins were critical for the long-term success of the transformation effort. The response of management was complimentary to the response of the previous domain. The response indicated a great sense of resolve in changing systems, structures, and processes that did not fit well together as part of the new business model. The firm has a strong culture of promoting and developing people who can put a concept into action. This approach supported the evaluation of lessons-learnt at each level, enabling the organisation to improve through continual and incremental development over time. The management team indicated that it was crucial to recognise and reward the team's efforts while also channelling good energies to launch the next task. This tact was a critical aspect that prevented complacency from setting in. Celebrating interim accomplishments had to be managed well however as otherwise might result in a false sense of accomplishment, which could also be delivered subconsciously at times.

Management also recognised that this was a marathon rather than a sprint activity, and that a surge of energy to gain on a few short-term wins will leave the team with little energy left to seek more growth ambition in the future. To achieve a comprehensive transformation, the Academy change project required a balanced investment of time and resources. To manage individual or team fatigue

could be the most serious threat to this transformation endeavour, as if the change was not dozed properly, it had the potential to endanger the hard work in a relatively short period of time. Management committed to leverage every job completion and achievement to reinvigorate the sense of urgency, ensuring that all Academy team members were always reminded of the end goal. Management supported the drive to build additional credibility into the project initiatives through continuous communication about how short-term wins contribute to the broader change effort. Especially at a time when the worldwide pandemic was putting the entire training and learning environment to the test in terms of robustness and stability, this aspect became even more critical.

4.4.3.8 - Institutionalising new approaches

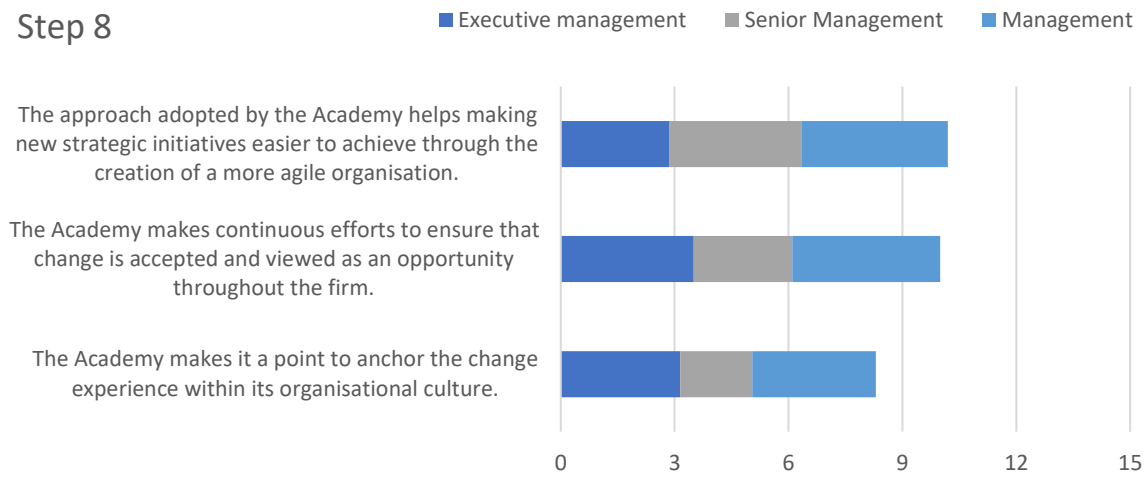

Figure 29 - Institutionalising new approaches

The last domain saw the Academy Managers registering the highest scores overall, indicating that the Management tier identified greatest benefit in institutionalising the improvements and changes brought about by this transformation project. The institutionalisation of change is a significant milestone for this project, and notably an important landmark for the management team involved in the project. A primary priority for the Academy is that of maintaining high quality standards, given its role as part of a global big four firm and its status as a licenced institution subject to regular external auditing review. All management tiers clearly indicated confidence in the Academy's ability to introduce a leaner and more agile approach and the ability to draw value from lessons learnt whilst looking forward to implementing more adjustments in the future. A major focus was on aiding the Academy team in becoming a more aware, digitally competent, and empowered workforce that is capable of taking on new responsibilities in response to future business change.

4.5 The Academy Team Benchmark Survey

The purpose of the team benchmark survey was to gauge the baseline knowledge and learning aptitudes of employees at the Academy. The survey focused on several areas derived from the Vision and relevant to the subsequent planning stage organisational culture, management and leadership, team dynamics, digital technology, knowledge management, personal learning, team learning, and the value placed on learning. The Academy team is comprised of twelve permanent staff members, excluding the second senior manager and myself. The new vision and project deliverables were presented at project kick-off, following which the team questionnaire was distributed digitally to all Academy staff. Each team member actively participated in the team benchmark survey, which established the baseline measurement of team status.

The survey consisted of 40 questions and can be found in Appendix C. They were grouped under 8 clusters of importance to the project achievement with five subset statements in each. I designed survey based on my understanding of the needs at that stage. The survey contributed towards stronger dynamics whilst developing a culture of trust, open communication, and mutual collaboration among employees. This survey was crucial in gauging the Academy team's collaborative approach, problem-solving abilities, and team cohesion. It provided valuable insights that guided the development and implementation of the vision.

The development and professional growth of employees was clearly fundamental to the future success of the Academy. The assessment covered eight areas of team development and was designed to measure the variance between the start and at the end of the project. This quantitative review was essential for the future project evaluation of the success of the project. The initial assessment established the team's state of play at the start of project, with the second indicating the project impact in terms of processes, learning and knowledge attained.

4.5.1 Analysis of the baseline survey

Figure 30 presents the top line summary of the survey and shows the areas falling below the mean value of 3.03 (of 5). Throughout the project the benchmark data was used as a reference point to direct project effort in the most effective manner.

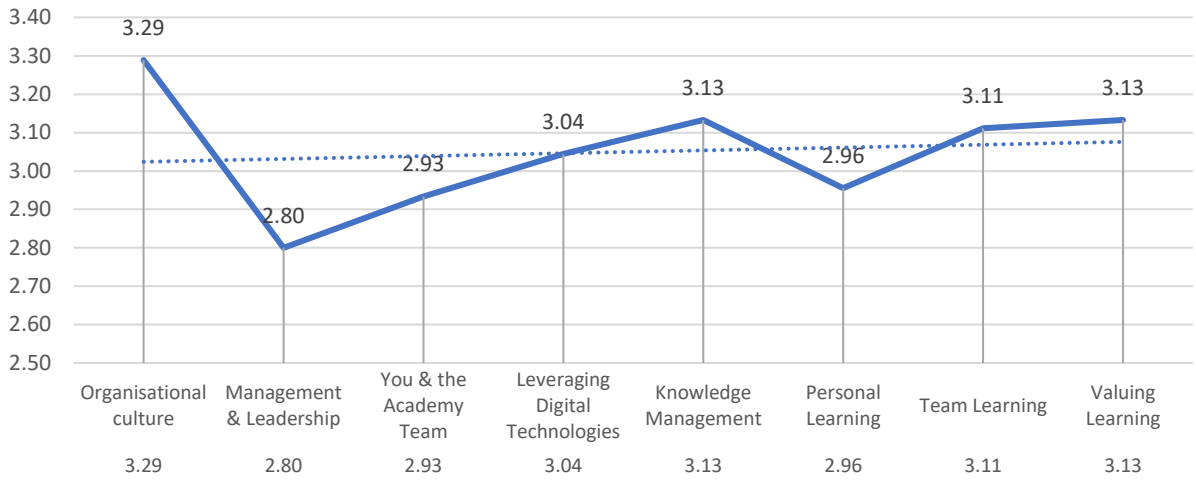

Figure 30 - Team data analysis

This benchmark noticeably indicated that the employees felt most comfortable with the organisational culture and the environment presented by the Academy and the firm. The parameters of management and leadership, their position and role within the Academy, and personal learning carried the lowest average scores indicating that these team characteristics required the main emphasis in this part of achieving the vision. Section 4.4.2 analyses in more detail the outcomes about each aspect of the Academy operation.

4.5.2 Analysing of the elements of the team baseline survey

4.5.2.1 - Organisational Culture

The first set of survey questions related to Organisational Culture at the Academy (Figure 31). At the

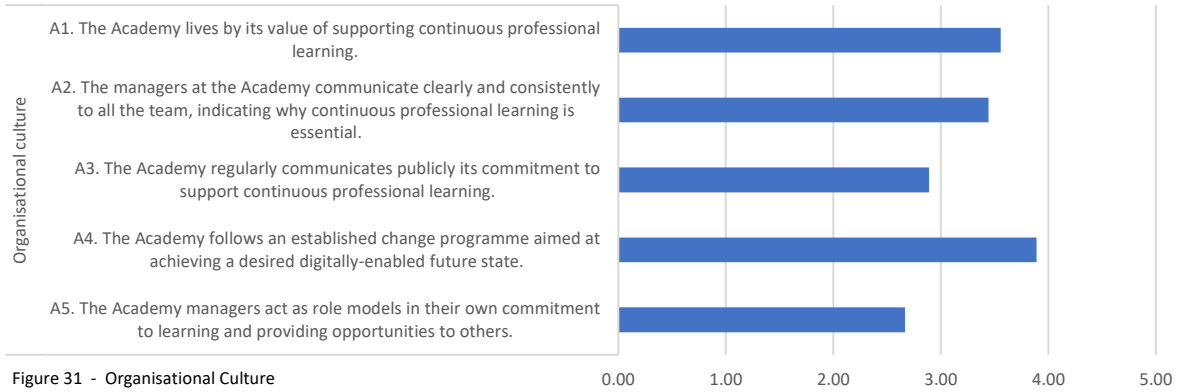

Figure 31 - Organisational Culture

heart of its operation the Academy upholds the core principle of promoting ongoing professional development across the firm. This principle is not just a mere ideal and is actively embraced by the managers at the Academy, who consistently and clearly communicate its importance to the entire team. The team understanding is that continuous professional learning is not only essential for individual growth but also crucial for the collective success of the firm. Moreover, the Academy takes

great pride in publicly affirming its unwavering dedication to support continuous professional learning. The change project set its sight on a desired future state, one where digital empowerment would enable the team to grow further. The lowest scoring for this cluster of questions indicated that the manager's profile as role model in terms of personal commitment to create open knowledge opportunities for others to follow needed to be given more importance.

4.5.2.2 - Management and Leadership

The second area being analysed concerned aspects of leadership and management, where major challenges emerged carrying the lowest scores. At the Academy, the f management belief was that

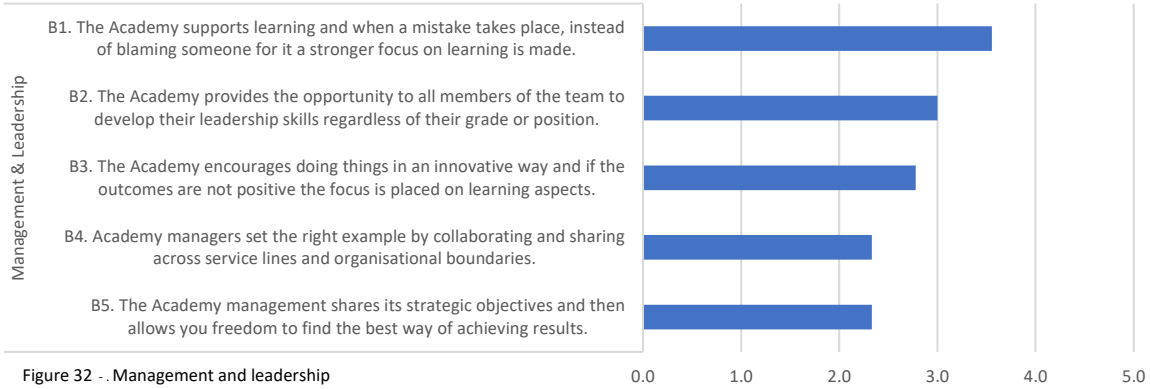

Figure 32 - . Management and leadership

leadership aimed to create an environment where mistakes are embraced as opportunities, where every team member has the chance to become a leader, where innovation is valued, and where collaboration and autonomy is given sufficient space to develop.

However, referring to Figure 32, the scoring indicated that more commitment to developing leadership skills in all members of the team, regardless of their grade or position was necessary. Everyone needed to be given the chance to develop full potential. All team members even if seasoned professional were to be further encouraged and supported to develop their skills, enabling them to adapt to change. It was deemed important that as part of implementation the focus would strongly consider learning from individual and team experience. The team members did understand that difficulties were steppingstones to success, providing valuable insights and lessons that could be applied to future developments.

4.5.2.3 - You and the Academy

The third area of focus analysed through the survey looked at the individual employee and their application of learning processes (Figure 33). Similar to the previous cluster of questions, the scoring

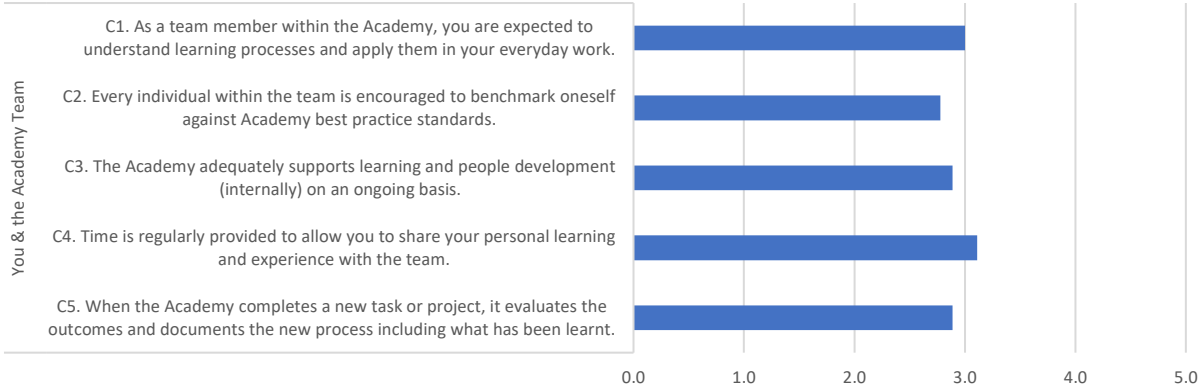

Figure 33 - You and the Academy

and analysis indicate that a clear focus was necessary in relation to engagement of every team member. Everyone within the team needed coaching support to set their own learning bar higher to align with the new standards established by the Academy delivered by this project. This approach required reinforced personal growth and contribution towards the collective improvement of the team's performance. Resources, tools, and opportunities were and integral part of the team's professional growth journey that need to be supported. The Academy recognised that investing in its team was the key to unlocking the Academy's full potential. The collaborative environment introduced by the project was to serve as a catalyst for knowledge exchange, where insights and lessons learnt were celebrated and disseminated. The collective knowledge of the Academy team was dependent on the successful implementation of this project.

The Academy's commitment to develop an environment that created opportunity for growth and improvement went beyond the completion of an initiative. When an initiative reached its conclusion, the Academy diligently needed to evaluate the outcomes and accurately document the newly acquired knowledge. This ensured that the team was constantly evolving, drawing from its experiences, and transforming lessons learnt into tangible improvements.

4.5.2.4 - Leveraging Digital Technologies

The fourth cluster of survey questions analysed the existing unified digital platforms (Figure 34), where

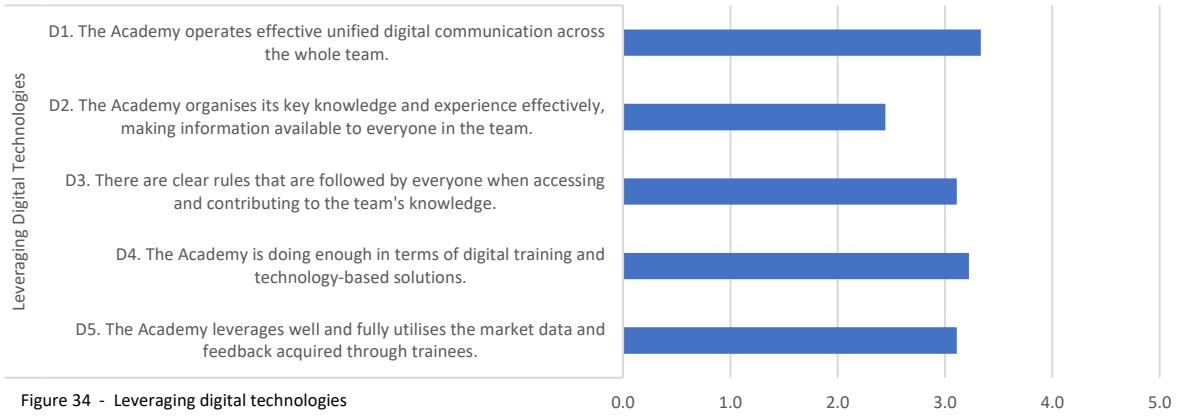

Figure 34 - Leveraging digital technologies

every member of the team could seamlessly connect and collaborate, enabling information to flow effortlessly across the functions and roles. The project was also characterised by physical segregation and remote work because of the global pandemic situation, making digital technologies a dependent variable in fulfilling everyday responsibilities. The scores in relation to this area of work indicated that the Academy team had grasped the power of streamlined communication, however there were still gaps in cultivating productivity and developing a cohesive work environment. Recognising the importance of digital training and technology-based solutions, the Academy made a conscious effort to keep up with the evolving digital landscape. This analysis indicated that the team recognised that staying ahead of the curve was crucial in remaining competitive and delivering top-notch services. The team understood the value of market data and feedback acquired through trainee participation. Leveraging such information, would help the Academy gain valuable insights into industry trends, preferences, and areas for improvement. Effective digital communication, organised knowledge, clear rules, digital training, and leveraging market data represented an opportunity for this change project. By embracing digital transformation, the team could harness the power of collective knowledge to create a knowledge-driven environment.

4.5.2.5 - Knowledge Management

The fifth area analysed as part of this survey investigated team knowledge (Figure 35). The Academy team considered knowledge as a valuable asset and that it was important to take steps to ensure that

Figure 35 - Knowledge management

the wealth of knowledge within the firm was harnessed and shared with the team. The team scoring indicated that recognition and appreciation were significant to the Academy's approach towards knowledge management. The Academy not only recognised but also rewarded individuals who actively contribute to knowledge creation and sharing. Such recognition acts as a strong motivator, inspiring the team to continuously strive to contribute to the collective growth of the Academy. The Academy assessed its future knowledge requirements, understanding that staying ahead of the curve was critical. The Academy has always ensured that it proactively met the evolving needs of the team and the industries it supported. This approach allowed the Academy to adapt and thrive when faced with rapidly changing landscapes. The team's openness to change supported the project recognising that effective knowledge management relied on robust technological infrastructure.

4.5.2.6 - Personal Learning

The sixth area of the team's assessment explored personal learning aspects (Figure 36). The score indicated that the Academy team needed still to work on the firm's core belief that learning was a lifelong journey and every individual employee is to be supported to make this a priority, directing

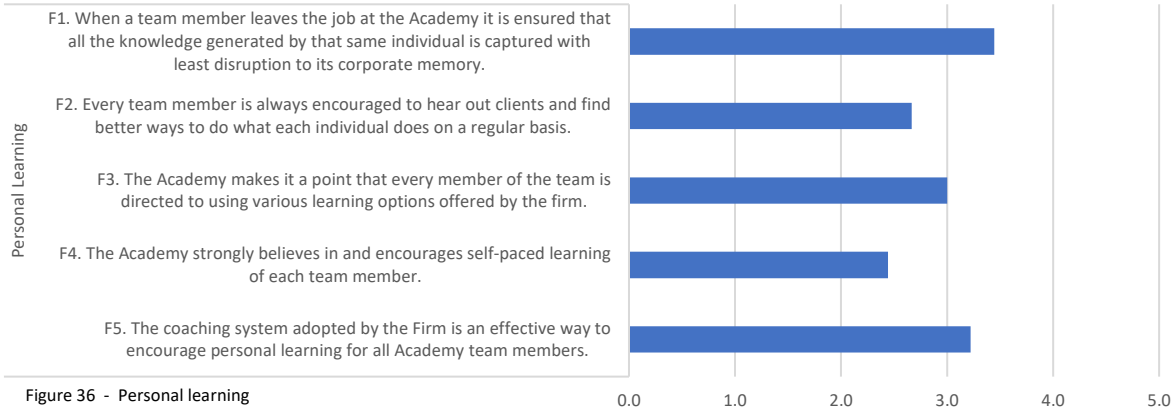

Figure 36 - Personal learning

each team member towards more learning opportunities. A consideration made as part of this analysis was that that different individuals have unique learning styles and preferences. The Academy provides a range of learning opportunities to cater to the diverse needs of every individual, with each team member encouraged to consider additional self-paced learning to improve specific skills and extending one's knowledge. Personal learning was a critical element to ensure that every team member was able to adjust to the new context set by the new Academy model. Another consideration related to maintaining the Academy's corporate memory, by carefully collecting and documenting the insights and expertise to minimise disruption linked to talent mobility.

4.5.2.7 - Team Learning

The seventh area of the team benchmark review was team learning. The scores indicated that the team acknowledged the Academy's collaborative environment and that it encouraged and rewarded collective learning achievements. The team valued the shared experiences and the lessons learnt from projects that involved multiple team members. The team follows the practice of setting aside dedicated time to review learning experiences, to ensure that knowledge gained was not lost but instead used to improve its everyday work.

The Academy supported its team member with broader learning experiences by encouraging them to

Figure 37 - Team learning

reach out and connect with individuals outside the Academy, share insights and build valuable connections. The scoring suggests that the support for team learning was deemed positive by Academy members. This positive scoring is also linked to the approach that a collective contribution of Academy members could lead to innovative solutions to even the most complex training challenges. This aspect could be further achieved through open dialogue and encouraged active participation, whilst sustaining an atmosphere of collaboration and shared learning.

4.5.2.8 - Valuing Learning

The eighth and last area analysed in relation to this initial team survey looked into the value of learning

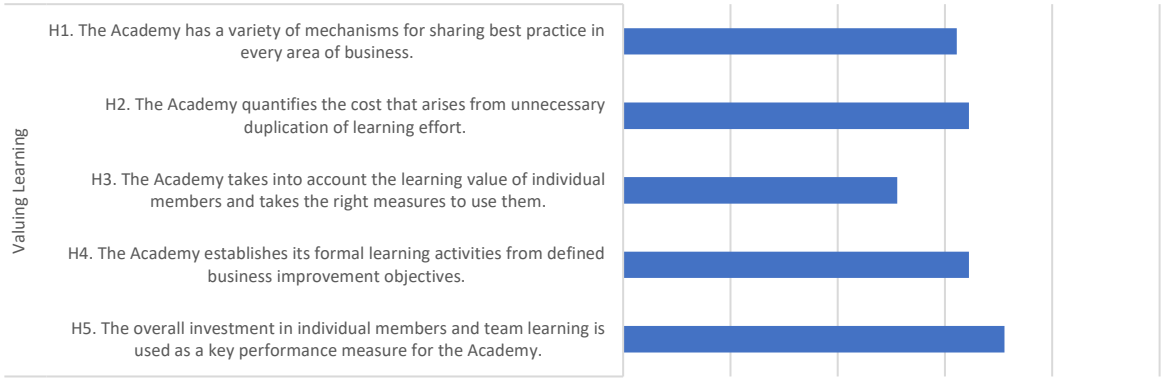

Figure 38 - Valuing Learning

within the team. The scoring in this area of focus (Figure 38) was also positive indicating that the team could relate well with the initiatives that bring value to learning. Amongst other aspects one of the firm's core principles of sharing best practice across every facet of its business is the immense value that collective knowledge brings to the firm. A concept that was closely linked to value that the team acknowledged was that valuable resources include time and effort, which could be saved by avoiding

repetitive tasks. By streamlining the learning processes, the Academy team had the opportunity to maximise productivity and achieved optimal results.

Another consideration linked to this analysis was the deliberate measure to leverage the learning value of its Academy members. Over the years this was achieved through mentorship programs, collaborative projects, or targeted assignments, or by strategically deploying Academy members on varied assignments to increase individual skills and create a rich dynamic learning environment. The new Academy project aimed to harness this approach to ensure that individual and team learning was linked to learning value that could yield positive and quality results. The team valued the holistic approach to professional development. As the scoring suggests there was belief in the drive for sharing best practices, minimising duplication, leveraging individual expertise, aligning learning with business objectives, and measuring the impact of the investment in team learning. The team shared the principle that dedicating effort to the culture of continuous learning and improvement that set the firm apart as a leading institution, driving both individual and organisational success.

4.5.3 Summary of Key areas

The analysis of the team questionnaire highlighted that active leadership and management were essential to ensure team engagement along the duration of the project. The inquiry made it more evident that business alignment against with the Academy's newly established standards to be delivered, every team member required targeted coaching and mentoring support. This was crucial to elevate their personal learning capability and knowledge. While the team recognised the significance of effective communication, effort was needed to enhance productivity and promote a unified work environment. Nevertheless, the questionnaire demonstrated the team’s motivation to proactively address the business challenges of the Academy.

4.6 Integration of Learning from the Diagnostic Activities into the Project Design

4.6.1 Analysing data collected and validating the new Academy vision

Analysing the interactions and data gathered from the community event allowed for a clearer and more articulate understanding of the vision and goals for the new Academy. The event provided an in between the new Agency's mission and its desired culture and identity. The alignment of vision with Academy's core values and principles related to how well the vision embodies the Academy's foundational values and principles as well as stakeholder perception in this regard. Gaps identified between the newly established vision and the Academy values led to suggestions for realignment on how the vision could better reflect the desired culture, ensuring cohesiveness across all areas of training.

The community event served as a means of validating the new vision. It involved assessing whether this key stakeholder group shared similar concepts and ideas during the visioning process, and if their perspectives and feedback aligned with the strategic objectives of the Academy. As indicated in 4.2.3, the emphasis placed on digital tools in the context of new training methods reflects a notable transition towards a more comprehensive utilisation of technology. Furthermore, the event presented an opportunity to assess the viability of the vision, considering the Academy's current resources, capabilities, and expertise whilst aligning with the trainers' shared priorities (Section 4.2.4). The event contributed to two key developments that influenced the Academy vision in a direct manner, namely:

- The need for further collaboration by promoting partnerships, enriching the breadth and availability of quality training beyond what was already available across the PwC network.
- A greater commitment towards practices that prioritise more business and environmental sustainability.

By analysing team and management data, it became possible to design the project in a way that allows for continuous monitoring of progress towards the vision. This included setting project milestones, monitoring developments, and regularly reviewing and evaluating the progress made in implementing the plan. This approach allowed the action research to identify and address gaps, as well as drive the necessary interventions to sustain progress towards the new vision.

4.6.2 Analysing available technology platforms

The future of the new Academy model was highly dependent on the introduction and implementation of innovative technology. As represented in Figure 39, the relationship between people, processes and the underlying technology determines several business opportunities, of most importance would be the new possibilities related to innovation, automation and scaling up the model in a consistent and sustainable manner.

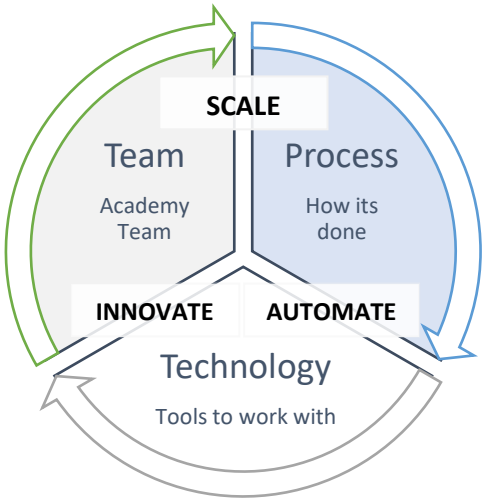

Figure 39 - People, Process & Technology Framework

The adoption of a fresh technology-oriented framework would act as the new digital foundation that enables the development of the novel business model. This was a pivotal component to the success of this transformation initiative. This consideration led to the design of a technology blueprint that outlined the implementation and integration of the technology solution to existing platforms operated at the Academy and by the firm.

When evaluating available technology platforms available that would support the learning model applicable to the Academy, several aspects were considered. The initial assessment investigated the opportunity to fully integrate the new platform with the existing technology stack already operated by the firm such as the client relationship management and client onboarding platforms. Looking closer into learning aspect the functional requirements evaluated elements such as course management options, content creation and delivery, advanced learner administration and tracking, assessment and grading, and reporting capabilities. The assessment established the fit between shortlisted technology platforms and the Academy's learning objectives. Another platform consideration was the scale of concurrent usage in terms of number of users and content without sacrificing performance or trainee experience. Scalability represented a crucial aspect, particularly in view of the anticipated growth of learning activities.

An additional crucial factor that was studied, pertained to the customisation possibilities that would enable the Academy to personalise the learning templates to suit the distinct needs of the Academy. The ability to customise the interfaces was deemed essential to deliver a trainee learning experience that aligns with the Academy and the project's specific goals and requirements. Moreover, the flexibility aspect in terms of branding was central, as the presentation layer had to align with the firm's visual identity and adhere to the firm's branding guidelines.

An additional factor considered during the analysis involved the integration of the technology with other systems operated by the firm. The assessment focused on evaluating compatibility and integration options to enable data transfer and content sharing from various sources. Furthermore, the technology platform underwent appraisal regarding user experience, intuitive functionality, user-friendliness, and interoperability across different devices and operating systems. These aspects played a vital role in ensuring easy navigation, clear instructions, and convenient access to support resources for trainees, thereby enhancing the overall learning experience.

Furthermore, the assessment of technology suitability encompassed data security and privacy standards. The analysis examined data protection policies, encryption measures, and compliance with regulations such as GDPR. The inclusion of security and privacy safeguards was deemed crucial to safeguard sensitive learner data throughout the learning process.

The assessment of the above-mentioned factors took a total of four weeks to conclude. Three platforms were shortlisted out of an initial seven platforms initially identified. The selection was highly structured to ensure objective evaluation that was based on weighed scoring criteria. This evaluative process involved multi-disciplinary effort and expertise that included, the Academy team at the business owner, the Information technology team, the Clients and Markets team as well as the Cybersecurity and Risk team. Involving experts from various teams was crucial to make an informed decision when selecting the most suitable technology platform that met the needs of the new Academy's learning model as well as the corporate standards and profile of the firm.

4.7 The Design Stage

Transitioning to the design stage involved crafting an action plan aimed at achieving the vision and resolving the problematic areas identified during the diagnosis stage. This stage involved setting goals and objectives, identification of potential solutions, and designing a plan to implement the chosen activities. The plan was to cover the implementation of appropriate interventions and sub projects, constraints and risks, monitoring progress and evaluating the effectiveness of every intervention using quantitative measurement where possible. During this design stage a key activity was to identify the resources needed to implement the plan. Resources included Academy employees, firm specialists, time allocations, and the financing required. The plan was developed in collaboration and input from all stakeholders to ensure that everyone involved would feel party to its success. My role as a change leader focused predominantly on ensuring that the plan was a coherent one and that it was considerate of every aspect of the business process, and subsequently to project manage its implementation.

4.7.1 Project design and planning

Creating a thorough action research-based plan for change and establishing a timeline played a vital role in ensuring the successful implementation of the project. This involved identifying the specific activities, tasks, and milestones that needed to be completed, as well as assigning responsibilities and allocating necessary resources. The analysis and interpretation of the collected data were essential for gaining valuable insights and developing an effective plan. The management analysis pinpointed specific areas that required significant attention during the implementation phase, as indicated in Figure 31 within Section 4.5.2.

The project implementation design involved early communication of the planned change process, including a projected timeline (refer to Figure 3), to the guiding coalition and key stakeholders. This ensured a strong initiation of the implementation. Weekly communication updates were established through main collaboration channels to keep the coalition engaged and informed. Monthly management briefings were conducted to ensure the implementation plan remained aligned with the overall strategic direction and goals of the firm. These meetings further elaborated on the change process defined and agreed upon with top management during the design stage.

A detailed plan was developed to support the implementation of the technology blueprint, including release cycles, resource allocation, and training requirements. Close collaboration with the firm's IT teams was ensured for successful deployments. The implementation included the rollout of a

comprehensive employee learning program to enhance the team's capabilities progressively and in a timely manner. Regular evaluation and monitoring of the program's effectiveness were conducted, ranging from daily to weekly basis, to support timely project development. Additionally, a significant effort was made to provide coaching and mentoring to support employee development and growth.

Furthermore, the implementation involved reorganising the Academy operations to integrate the newly established processes. This included reviewing existing processes and identifying areas for improvement. Streamlining workflows and redefining roles and responsibilities were part of aligning with the new vision. An essential aspect throughout the implementation process was regular communication and documentation of the revised processes. This facilitated the integration of the new processes into a quality framework.

The development of a quality framework, aligned with industry standards and best practices, was a crucial component of the implementation. Regular evaluations were conducted to identify areas for further improvement, and the quality framework was continuously reviewed and refined based on team feedback and results. A monitoring arrangement was implemented to track the progress of each component of the plan and regularly assess the effectiveness of the implemented changes. Adjustments and new strategies were implemented as needed. The achievements and milestones attained during the implementation process were communicated and celebrated to recognise and appreciate the efforts of individuals and teams driving the change. The well-structured project plan ensured systematic management of the project's progress.

4.7.2 The design of technology blueprint

The design of a technology blueprint was essential as it brought together several aspects relevant to the design and implementation of this project. The blueprint was a detailed plan that outlined the technology architecture, infrastructure, and components of the new digital solution and the learning processes that the Academy pursued, serving as a roadmap for technology integration that ensured business model alignment. The blueprint defined system specifications based on projected business growth, identifying appropriate technologies stacks that are supported by the firm at both local and international level as well as creating detailed designs and configurations of the anticipated learning interfaces. Following the assessment as described in the previous section of the Academy's technological needs and requirements, the blueprint aimed to identify the pain points, inefficiencies, and the key areas for improvement where technology would leave a significant impact.

The design technology blueprint aligned with the project's goals and objectives establishing how technology enabled the achievement of strategic objectives whilst enhancing the Academy's processes. The blueprint took into account the needs and requirement of all stakeholders across all levels of the firm in the blueprint design process. Gathering inputs collaboratively and understanding the requirements ensured the blueprint addressed the project needs and accommodated scalability and evolving technological opportunities without significant disruption or major redesign.

The design of the blueprint incorporated specific information concerning the integration and interoperability of systems and infrastructure, ensuring a seamless integration of the application. Since the application was hosted on a private cloud platform that hosts all the firm's global applications, the blueprint had to consider data sharing protocols and interoperability standards. Additionally, the blueprint design outlined comprehensive details to establish robust security measures for safeguarding sensitive data and ensuring compliance with the firm's standards and relevant regulations.

A key aspect of the blueprint design was to deliver an exceptional user experience for Academy employees, trainers, and trainees. Within this blueprint, user experience aspects included usability, accessibility, and the development of user-friendly interfaces. Moreover, the blueprint also incorporated strategies for contingency planning, backup systems, and implementing disaster recovery measures.

4.7.3 Establishing the "guiding coalition"

Implementing this change project had a significant impact on various aspects of the Academy's business model. "Establishing a guiding coalition" was taken from Kotter's 8 Steps and was intended to comprise leading individuals who could collaborate effectively and work together to support specific aspects of the change. The primary aim of the coalition was to provide clear direction and guidance throughout the change process, and to support individuals where needed. The guiding coalition met on a weekly schedule for the first three months of project implementation, which timetable was later revised to a meeting every fortnight.

Individual employees that were identified had either the authority or the expertise to influence and bring about change. The coalition represented different areas of the Academy business, with leads in the main three training streams including business, technology, and accounting. Administrative aspects of business such as sales coordination, training coordination and content design were also

supported by the coalition. The guiding coalition consisted of four individuals including myself, two leaders and one expert representing different areas of the Academy and the IT operation of the firm.

The guiding coalition contributed to a shared understanding of the project objectives, scope, and planned outcomes. Establishing a shared purpose and commitment to effectively deliver the change was achieved by aligning the project objectives as part of the design and sharing the outcomes with the coalition. The coalition's ongoing feedback was welcomed and it brought together a diverse range of skills, capabilities, and international experiences. This diversity nurtured a culture of innovative thinking and promoted a comprehensive understanding of the change project's challenges and opportunities.

Throughout the project implementation, the coalition had direct access to information gathered, the technology development and test environments supporting the change initiatives. Support to the coalition was ongoing through training, coaching and development opportunities through the firm's shared thought leadership.

The guiding coalition also played a pivotal role in consistently measuring the progress, effectiveness of change, and the impact of the change project itself. This was achieved by updating and sharing of project progress in contrast with the established project plan, monitoring of data sourced directly from the platform and by working closely with every Academy team member involved in the project. As the change leader, I actively adapted the coalition's methods and approach after considering feedback, lessons learnt, and the evolving business context. This flexibility ensured the coalition was able to swiftly respond to emerging challenges and seize new opportunities, maintaining an agile and adaptive stance throughout the change process. In summary the guiding coalition played a crucial role in supporting the change and building trust among the other members of the Academy team.

4.7.4 The change leader role and professional practice

The change leader role I assumed in this project encompassed several aspects of the action research-based change. The conceptualisation coupled with a clear vision for the desired change in business model was one of the very first efforts I had to grapple with at the early stages of the project. This new vision had to be communicated and promoted internally to ensure that management as a key stakeholder was inspired and motivated to embrace and support the change.

The professional practice within the context of a global firm builds on collaborative environments where all stakeholders are to feel empowered to contribute their insight and expertise. My role was

to facilitate an open communication setting, promote active participation, and support shared decision-making that values diversity and distinct perspectives. At the front of my mind as embedded researcher, was my guiding role throughout the action research process to ensure that the project evolved in a systematic and organised way.

Embedding digital more prominently in the new Academy model and the change leadership itself depended highly on data-informed decisions. In this role, I aimed at utilising data and research evidence coupled with academic theory to drive project execution throughout the action research process. The main responsibility was to design, collect, analyse, and interpret information that could help in the identification of problem areas, support the actions needed, and evaluate the outcomes to encourage further progress. Throughout the project I did uphold high ethical standards both as part of the responsibilities of an embedded researcher but also in the context of a reputable professional services firm that highly values integrity and employee well-being.

Seeing this project through required flexibility and adaptability in the change leadership approach. The action research involved iterative cycles of micro planning, implementation, and reflection helping me address efforts in accordance with emerging insights and changing contexts. Another aspect of the change leadership role was to keep the key players in this project actively engaged by sharing regular updates throughout the action research process. After few months into the project a good work relationship emerged helping me establish the right expectations at a time when business turmoil was probably at its peak due to external pandemic-related factors. Regularly updating every individual and ensuring transparency throughout the process developed a greater sense of ownership and commitment by the whole Academy team.

My role in this project was also to embed longer-term sustainability and impact on the Academy's operation and organisational culture. The new business model and processes developed as a result of this project were designed to ensure lasting benefits beyond the action research project whilst promoting a culture of continuous learning and growth. This was achieved mainly through reflection, learning from failures as well as positive outcomes with the aim of improving future actions and interventions taken by the Academy. The reflective approach throughout this project helped critically analyse my own actions, assumptions and bias. This was an opportunity to learn through the project and at the same time seek opportunities for self-improvement and professional development to grow as a change leader that could drive meaningful change within organisations and communities. Upon completing the diagnosis and analysis stages, I was resolute to proceed with confidence towards an effective project implementation.

4.8 How the Academy Vision changed

The Academy vision established at the start of the project evolved as a result of community collaboration as well as the fast-paced evolution of the general business context. The validation process undertaken as a result of the community trainer event contributed to a renewed vision that primarily considered an increase in open collaboration with other training institutions through partnership promotion and secondly focus more on commitment towards practices that prioritise business and environmental sustainability. Another factor that contributed towards a vision change was the firm's global vision and market anticipation that contributed to increased emphasis to deliver increased personalised training solutions that promoted increase trust in the context of a national market context that was seriously challenged by the pandemic. This drive reinforced the Academy's vision to be more inclusive and supportive as a time of major business flux.

The renewed vision could be associated with a number of benefits, ensuring that the Academy remained aligned with market demands and trends as well as to new business growth opportunities by opening up to new markets and partnerships that aligned well with the Academy's strategy.

CHAPTER 5 - Project implementation

5.1 From project design to project implementation

Transitioning from project design to project implementation marked a crucial juncture in the action research project. The project's diagnosis and design stages facilitated the development of a more comprehensive understanding of the project's objectives. Through the diagnosis phase, which encompassed an analysis of the community, management, and Academy employees, the underlying challenges that the project aimed to tackle were identified, resulting in valuable insights and findings.

As the planning and preparation work reached completion, the focus shifted towards executing the project activities and achieving the defined objectives. The Academy team under the leadership of the guiding coalition were organised and assigned to support the execution of various project tasks (refer to Section 1.9 - Figure 3). This approach ensured that the team had clear visibility of the project rollout in a way for each employee to carry out the responsibilities effectively. The roles and responsibilities assigned to team members were in line with their areas of expertise and tasks that each member was accountable for. This approach bred more accountability and ensured that everyone understood their contribution to the project's success. The sequence of activities, dependencies, and the estimated durations were also shared with the team. This helped in tracking project progress and ensuring that the deliverables would remain on track.

Regular monitoring and evaluation of project activities were conducted to track progress against the established schedule and milestones. This project timeline allowed for early detection of any deviations, facilitating timely corrective actions to keep the project on course. The project implementation followed the firm’s risk management process that puts in place appropriate measures to minimise the likelihood or impact of identified risks. Finalising the plans for project implementation looked also into effective communication between team members, guiding coalition, management and myself in the role of project leader, by having regular weekly sprint updates as monthly status updates at Academy Committee level. Quality assurance and control measures did also accompany the implementation, ensuring that the project outputs met the intended objectives and requirements.

5.2 The project implementation activities

The project implementation encompassed a range of activities, such as team training and coaching, technological integration, and the establishment of an integrated quality framework aimed at consolidating all changes. The core project implementation phase extended over a period of nine months, commencing from mid-2020 up to the end of the first quarter of 2021. Throughout this transformative process, a daily journal documented the progress and activities. The transformation was rolled out in parallel to the established processes to avoid undue pressure on any function or role within the Academy. There were five main phases in the project and these are outlined in Table 5 below.

Roadmap for Project Implementation	
#1	**Project Kick-off and Vision Alignment**
Duration	Mid-2020 to End of Q1 2021
	Communicate the vision to all team members, including the guiding coalition.
	Empower team members with essential training, coaching, resources, and continuous support.
	Ensure alignment of all Academy employees with project objectives.
#2	**Technology Blueprint Deployment**
Duration	Concurrent with #1
	Deploy the technology blueprint and integrate it into the existing infrastructure.
	Engage technical experts and conduct rigorous testing and quality assurance.
	Implement robust cybersecurity and data privacy measures.
	Overcome integration challenges and ensure seamless communication between components.
	Address system compatibility, data migration, and ensure compliance across multiple jurisdictions.
#3	**Structured Employee Learning Programme on new technology**
Duration	Concurrent with #1 and #2
	Provide training on the use of digital tools and technologies.
	Enhance cybersecurity awareness and promote secure digital practices.
	Enable employees to leverage data and analytics for improved trainee experiences.
	Empower employees with real-time data to support operations and decision-making.
#4	**Team Coaching and Mentoring**
Duration	Concurrent with #1, #2, and #3
	Intensify coaching and mentoring to facilitate the adoption of new processes and technology.
	Target areas of improvement identified between legacy processes and new methods.

	Evolve coaching and mentoring in parallel with the reorganisation of Academy operations.
#5	**Integration of New Services as part of the New Quality Framework**
Duration	Concurrent with #3 and #4
	Integrate digital services into the new Academy training model.
	Develop a new internal quality assurance framework.
	Obtain renewed operating licensing from the local regulator based on the new framework.

Table 5- Roadmap for Project Implementation

5.3 Project Phase #1: Kick-off and vision alignment

Project implementation kick-off marked a pivotal moment when the project took flight. This brought together all key stakeholders, team members, and resources towards a common goal. This critical milestone ensured vision alignment, a fundamental element that paved the way for a cohesive and collaborative approach for the project.

The start of the implementation phase served as an opportunity to reiterate the project's purpose, goals, anticipated timeframes and desired outcomes. In my role as project leader, I assumed the key role of sharing the project's scope, timeline, and the roles and responsibilities of each team member. This open approach created a common understanding of the project's objectives, ensuring every team member was on the same page from the very beginning. Vision alignment, on the other hand, was essential as it helped gaining consensus among key stakeholders regarding the project's strategic direction. Given the uncertain pandemic times that the community was experiencing, reaffirming the vision was regularly necessary. By aligning the vision, all team members and stakeholders became united in their commitment to achieving the project's ultimate objective, minimising uncertainty and potential conflicts during implementation. To ensure effective communication open dialogue was encouraged, promoting collaboration, and enabling for the free flow of ideas.

5.4 Project Phase #2: Implementing the Technology blueprint and platform deployment

The implementation of the technology blueprint described in section 4.7.2 began by setting up the cloud infrastructure within the PwC tenant. The PwC's infrastructure is hosted on a private cloud having a single tenant that brings together all hardware, storage and network setup needed by the firm to operate efficiently. This effort was led by the Technology team within the firm in collaboration with the Information Security and Risk team. The new digital environment was operational with 6 working days of service request. Providing the right sized environment was based on factors such as cost, scalability, security and geographical reach in accordance with general data protection regulations (GDPR (EU) 2016/679). The blueprint planning undertaken in the previous phase defined the cloud services and components that formed the foundation of the operating infrastructure. This included details about virtual machines to host development, staging and production environments, data storage, databases, and load balancing. The network architecture and security measures needed to comply with PwC corporate standards including IP addressing schemes, and firewall rules to control inbound and outbound traffic. In addition, ensuring the right level of data security involved giving significant attention to factors such as data encryption, access control, as well as identity and access management.

The implementation of this phase also included the configuration of servers to host the applications and interfaces. The setup in relation to storage and data management implemented included data backup and business continuity planning. The cloud infrastructure allowed for easy scaling and management of storage capacity, processing power and memory allocation. This made it easy to develop the LMS service along the way, even beyond the term of the project. As part of this infrastructure monitoring and management tools to gain visibility into the performance, availability, and health of the cloud infrastructure were implemented. This included the setting up monitoring alerts, activity logs, and reporting mechanisms to proactively identify and resolve any issues that could arise. This ensuring that the experience of the trainees making use of the system would be constantly optimised.

Following the provisioning and configuring the new infrastructure, the learning management system could be deployed onto this cloud setting. The first test environment was deployed within three weeks from start of the implementation phase. The implementation of the development environment served as the new application's test area. The setting up of the testing environment was needed to ensure that all components of the infrastructure and application were functioning as expected. This was the also the first instance where performance, scalability, and reliability could be thoroughly validated.

The new digital learning system started taking shape by incrementally developing and configuring the solution based on the blueprint within the test environment. Following each successful test cycle in the development environment, the implementation of the technology blueprint was subsequently deployed in the production environment. The production environment would serve as the new trainee-facing digital learning portal of the Academy. The test environment presented a valuable opportunity to initiate the development of the Academy's structured training program for the team. The environment enabled all Academy employees to engage directly with the new digital solution to start building the first experience. The approach connects with the literature in 2.5, predominantly Kolb's definition of learning as a transformative process defined as knowledge constructed through firsthand experiences (Kolb, 1984). The test environment served also as the initial platform for engaging in technical discussions with the guiding coalition regarding the specifics of the Academy's operational reorganisation. Additionally, every planned deployment included further user training and documentation that sealed off the learning process.

Taking a structured approach that followed meticulous planning enabled the team to implement the technology blueprint efficiently and configure the solution to effectively align with the new learning business goals.

5.5 Project Phase #3: Creating a structured employee learning programme on the new technology

This phase included a comprehensive set of training activities for all team Academy members. The primary objective of these coaching initiatives was to enhance the essential skills and competencies necessary for operating the Academy proficiently in the shorter term. Taking this approach was necessary to ensure that the new Academy model could be operated efficiently notwithstanding the continuously evolving digital context. The core areas of improving knowledge of digital skills, problem-solving and decision-making capabilities. The coaching programme targeted the following skills:

- Technical proficiency in understanding the LMS interfaces, options and functionality.
- Training course design to increase the ability to design and build courses that provide the right trainee engagement
- Content assimilation to enable the uploading and management of multimedia content
- User management to ensure creation, modification and removal of trainee account registration, enrolment and permissions
- Assessment creation to assist in the design of learning quizzes, tests and assignments
- Data analysis and reporting to enable the evaluation of trainee analytics, use of dashboards, course completion rates and training evaluation
- Standard troubleshooting to enable each team member to solve mainstream technical issues or glitches that could be encountered by trainees
- Intra system communication to facilitate platform-based communication with and between trainers and trainees
- Accessibility to ensure all training material was readily available to all trainees

5.5.1 Use of Digital Tools and Technologies

This training provided an overarching view on the latest digital tools and technologies relevant to the Academy team's area of work. This training included the concepts of cloud computing, basic data analysis, machine learning, automation, and digital collaboration platforms. Building competence in using these tools would enhance the productivity, efficiency, and understanding of every person. This training programme include six modules split over three sessions of two hours each. All sessions were demo-based and instructor-led where participation was mainly through discussion and shared thought leadership content.

5.5.2 Data Literacy and Analytics

The training on data literacy and analytics helped team members to understand how to extract, interpret, and at times analyse data effectively. This training taught each Academy member how to draw reports and insight from data platforms, how to support decision-making about trainee progress and performance, and use visualisation tools to present information to senior management or regulator. Developing core data literacy skills helped the team to make best use of data for both operational and strategic decision-making needs. This training programme was split into four modules split over four sessions of three hours each session. Each session was entirely hands-on and facilitated by an experienced instructor where each team member learnt how to use different tools to work with data. Data generated by the LMS was used for the purposes of building insights and reporting.

5.5.3 Cybersecurity Awareness

With the Academy services and interaction becoming increasingly digital, cybersecurity training to inform team members on the importance of data security, privacy, and protection was critical. The areas covered included how to identify common cyber risks, best practices for secure online behaviour, and the basics of data encryption and secure communication. Enhancing cybersecurity awareness will help safeguard organisational assets and mitigate potential risks. This training programme include two modules split over two sessions of two hours each. Sessions were instructor-led and explored the various of cyber security topics relevant to Academy operations and the digital platform. In this regard, emphasis was made on password and authentication, phishing attacks, social engineering and mobile device security amongst other aspects relevant to the new operating model.

5.6 Project Phase #4: A coaching and mentoring programme for the Academy team

PwC is a renowned firm that is acknowledged for its emphasis on continuous learning and development of its workforce. The firm has developed over time a strong reputation for providing comprehensive training programs to all its employees, which often includes coaching and mentorship opportunities. PwC's commitment to learning and professional growth is reflected in its investment in employee development and the focus on staying ahead of industry trends. This project leveraged this culture to ensure that the effectiveness and quality of PwC's coaching and training program closely modelled to adapt for the Academy's business context.

Building a valuable developmental relationship with all the Academy included both a coaching and mentoring approach. Whilst the mentoring aspect focused mainly on the longer-term personal and professional development of each team member, the coaching approach targeted specific skills and performance improvement aspects needed in the immediate term. Individual and team mentoring assumed an informal approach with the meeting scheduled as necessary. The coaching approach adopted however was more structured with a very clear competency programme. To address the new requirements from this project the coaching and mentoring programs, were designed around the Academy roles and fresh needs assessment. The updated program considered the existing skills, competencies, and performance levels of the Academy, along with anticipated future requirements. The areas of improvement and specific training needs were established through collaboration with team members and based on individual and team goals. The collaboration was necessary to determine clear and measurable goals for the coaching and training effort.

In my role as the project leader, it was my direct responsibility to ensure that the objectives of the coaching and mentoring programs were in line with the Academy's newly established business model. Additionally, I directly supported the program that addressed specific areas of improvement that had been identified. The programme included hands-on workshops that were taken online, designed as twelve different modules and included typical work case studies that were followed up by individual coaching sessions. The training sessions respected a structured timeline and schedule to ensure consistent and progressive team learning. In the shorter term the coaching sessions delivered focused training aimed at enhancing specific skills required by each team members. The design of the sessions was developed in liaison with the guiding coalition to ensure relevance and engagement. The format of each session was consistent throughout the programme.

At each team session a new digital service or module was presented to the group. Each session introduced one new module, function or process. The specialist list of training areas included:

- User and trainee management from registration to exit including mass onboarding
- Training management, registration, enrolment. group and cohort management
- Automated training event booking and subscription management
- Generation of detailed course reporting and LMS-wide logs
- Design of course to meet various requirements including instructor-led, self-pace, blended or entirely online
- Building training collaboration by embedding activities to the course design
- Multimedia integration including the use of SCORM-based content
- Managing trainee assessment (peer and self-assessment) and annotation of files
- Advanced course routing configuration based on trainee based triggers
- Add courses in bulk, backup and restore large courses with ease
- Advanced grading methods to ensure efficient management of the trainee gradebook
- Certification design and management for individual trainees and corporates
- Set up competencies with personal learning plans across training courses

Each session was followed by a team dialogue on how the newly introduced concept could add value and benefit the work practice. Every individual team member would be then asked to take a case study approach that would be presented at the subsequent session. The individual case had to employ the newly learnt method as part of the solution. The solution to each case study was created within the development platform serving as a testing and training area. At the start of the subsequent session, every individual shared the respective case from the previous session with other members exhibiting the newly acquired skills. This approach encouraged knowledge sharing and enabled every team member to be innovative and share their expertise and best practice ideas. Enriching knowledge sharing and problem-solving ideas was a way of reinforcing and strengthening key learnings.

This collaborative training approach supported the development of new skills and behaviours envisaged to be needed for the upcoming two to three years. The training provided interactive and engaging learning experiences that effectively encouraged active participation and application of learned concepts. This approach was a key design concept that was agreed upon and channelled through the guiding coalition. The sessions provided the right opportunity for practice, provide constructive feedback, reflection to reinforce skill development and recognising collective strengths that were key to this learning process.

The coaching and training programme underpinned the opportunity for self-assessment and self-reflection encouraging personal growth through continuous learning and ownership of the

development of the new Academy's business model. This effort was complemented by individual mentoring sessions that addressed specific needs and challenges met by some individual members of the team. These sessions made it easier and encouraged the team to seek guidance and support as they continued their professional development journey. The team learning methods used provided a comprehensive reskilling experience to every team member enabling to transfer individual learning back to the team through sharing. This one of the ways how individuals learnt new concepts, applied their knowledge, and actively shared their learning with their fellow team members. The transfer of expertise and sharing of experiences directly supported the team's development with each employee growing in confidence in a short period of time.

5.7 Project Phase #5: Integration of New Services as part of the Quality Framework

Concurrent to the implementation of the technology platform and the rollout of the coaching and training programme for the team, a new documented mode of operation was mandatory. A new operations model needed to be put in place providing more holistic and quality output. The operational changes underlined the determination of the Academy team to create a dynamic and enriched learning environment, that would allow all trainees to benefit from higher value service and support.

The integration of the new service model as part of the Quality Framework commenced eight months after the start of implementation allowing time for the full absorption and alignment of the new methods, tools and ways of working. This approach which took four months to complete was required given the extent of change brought about by this change project. The technical teams taking forward this review worked in parallel and often supported one another in areas of high dependency or business overlay. The areas of operation that were revisited through this project included the following nine areas of intervention.

5.7.1 Trainee admission, progression, & certification

The trainee admission, progression, and certification processes were transferred to a completely digital setting encompassing the comprehensive process of selecting, monitoring, and managing individuals as they pursue a training programme. Introducing digital profiles for all trainees from registration to completion of training ensured that every trainee met the necessary standards and requirements set by the Academy and the regulatory authorities. The new process addressed the legacy process where most information was either retained in separate datasets or at times manually logged, requiring multiple data reconciliations. Different Academy business streams operated differently based on individual requirements or legacy processes that were formerly operated by third parties prior to these being acquired by PwC.

5.7.2 Trainee-centred learning and assessment

The new operating model focused mainly on trainee-centred learning and assessment, recognise that that every trainee is an active participant onboard a learning journey, capable of setting goals, making choices, and reflecting on their progress. The new processes aim at promoting a collaborative relationship between trainers and trainees, encouraging open communication, individual support, and ongoing feedback. This approach supported greater trainee empowerment enabling every individual

to take full responsibility for their learning, enhancing their critical thinking and promoting lifelong learning.

5.7.3 Learning resources & trainee support assets

The project altered the way learning resources and trainee support assets are created management and maintained. The learning resources such as digital guidance notes, e-learning modules, videos or lecture slide decks, constituting primary materials used to convey knowledge and skills, were now catalogued and version controlled using a central information repository. The trainee support assets on the other hand, such as study guides, tutoring sessions, FAQS and help desk content were organised and retained within the local training programme. The introduction of the new digital platform brought in new training components enabling the training programme to become more comprehensive. These new components included animated interactive content-based eLearn design, virtual interactive lab sessions (used mainly in tech training) and gamified learning features. The revised team operations needed to manage new learning assets with the aim to provide trainees with the necessary tools, guidance, and assistance to optimise their learning ability, ensure comprehension, and enable successful completion of the training program.

5.7.4 Management of trainers & expert staff

A number of new processes had to be introduced to oversee and effectively manage the trainers and experts from the parent firm who are responsible for delivering training programs at the Academy. The new processes encompassed various activities to ensure the onboarding, development, support, and evaluation of trainers and experts were optimised. All experts and trainers engaged by the Academy were subject to rigorous mandatory training and preparation. As a result of this project and the newly introduced features and options, a new train-the-trainer programme was required. The operations around the new model included revision of onboarding training, ongoing training and development initiatives to enhance the trainers' instructional skills, updating of subject matter training content, and familiarisation with the new training methodologies and tools adopted by the Academy. This train-the-trainers programme enabled the Academy team of trainers to get up to speed with the digital developments taking place at the Academy. Apart from focusing on how new digital training content could be developed or redesigned in collaboration with the Academy team, the sessions focused on the different modes of preparation and delivery of future sessions. Preparation of trainers assumed added importance given that a number of registered trainers hold strong specialist technical knowledge in fields such as accounting, business and IT however, would have never underwent extensive pedagogical training. This aspect alone put greater onus on the Academy to

ensure that every trainer was well prepared. The training for trainers is delivered by a number of trainers having years of experience in training and included extensive and practical use of digital equipment from smartboards to 360° interactive cameras. The new processes supported by measurement helped improve the feedback loop and performance of trainers leading to enhanced overall quality of training delivery.

5.7.5 Information management in terms of data governance including data privacy

Information management practices from an operational perspective had to be completely revisited given that all systematic and effective handling of information and data related to training programmes, trainees, trainers, resources, and all administrative processes. With the implementation of new learning platform organising, storing, retrieving, and consuming information to support decision-making, improve operational efficiency, and enhance the overall effectiveness of the Academy required alignment. Data imported into the new system had to be cleaned to ensure it was fully compliant and consistent with the new policy framework. In close collaboration with the IT team, the governance of data was harmonised to the new business process, such as, need-to-know principles, retention timeframes in line with trainee consent and the firm's policy on data handling. This policy effort addressed data management at source ensuring that the handling of trainee data was managed as part of the automated process requiring less maintenance and manual intervention in terms of data transformation or timely purging.

5.7.6 Public information open to the community

The new model sought to make training-related information increasingly open to the community, promoting transparency, awareness, and community involvement in all training initiatives. The operational changes had to address a more digitally connected environment encouraging individuals to explore and engage with the Academy's offerings, support a culture that promotes lifelong learning and create opportunities for collaboration and knowledge exchange between the Academy and the wider community. The public information open to the community were made available through the Academy's portal with course information sourced directly from the LMS. This approach meant that less effort was needed to maintain training portfolios but also ensured that any changes applied to the training programmes would instantly feature on all public-facing interfaces. Connecting the LMS to the Portal was managed by the IT team and made use of the firm's proprietary tools to sync information between systems.

5.7.7 Design & approval of training programmes

The design and subsequent approval of new training programmes by the national regulator. The new business model introduced innovative ways and opportunities of designing and delivering accredited training programmes. The new business model enabled the introduction of the following elements as options in use with the design of new training programme:

- microlearning focus where short and focused segments of learning content designed for quick consumption and purpose
- applied game elements, such as leaderboards, point scoring, badges, to increase motivation and engagement
- integrated videos with clickable elements, quizzes, and branching scenarios based on learner interactions to boost engagement
- real-life simulations that allow learners to make typical decisions and learn through outcomes
- social learning spaces, like forums or embedding of social media channels, that promote collaborative learning and peer interaction
- interactive infographics that provide immediate information about the learning journey
- live interactive audiovisual content such as podcasts, live streaming, virtual workshops
- interactive breakout sessions, chat channels, fora and Q&A sessions

The implementation of the new quality standards set the specification design for the application of new elements in the design of new training programmes that the Academy plans to offer to its trainees. The design of training programmes under the new business model followed a rigorous process in terms of design and quality. The Academy management made the decision that the training programmes designed prior to the introduction of the new digital business model and prior to the new standards would also to undergo redesign and consequent regulatory reapproval.

5.7.8 External quality assurance management and regulatory reporting

The new digital business model required an updated licensing procedure to be undertaken with the local regulators. The revised licensing process entailed an external accreditation process that would validate the quality of system and the training programs on offer. Quality assurance related to operations involved a new commitment to continuous improvement. The new processes included regular review and updating of training programmes based on trainee feedback, market or industry changes, and emerging learning trends. The accreditation process itself was built on continuous improvement initiatives that analysed operational data about trainers and trainees, training

evaluations, and ongoing measures that enhance the quality and relevance of training delivery. The new operational processes included methods that helped to Academy achieve compliance and accreditation in line with established national quality standards that enhanced the repute of the Academy.

5.7.9 Ongoing monitoring and data analysis

The primary purpose of ongoing monitoring at the Academy was to review progress and performance data that was enabled as part of this project implementation. Monitoring was essential to place timely interventions, identify areas of the new business model that required improvement, and ensure that the alignment of training outcomes is within the established Academy objectives. More specifically the implementation phase introduced a plethora of data points and metrics to monitor and analyse the effectiveness of the new business model which are described below:

- User login and active users patterns in terms of frequency, indicating LMS usage and identify the most and least active cohort types
- Time spent by trainees, measuring the duration every account spends on a particular course, module or a learning resource
- Course enrolment and completion rates, measuring the number of trainees who have accessed and completed a course as a ratio of the total number of eligible trainees
- Content access patterns, helping to understand which content is most and least accessed and viewed, helping to pinpoint popular or otherwise underutilised and redundant resources
- Progress tracking, monitoring trainee's progress through a course, including modules completed, time taken, and how many sections left to be covered
- Assessment scores, providing learners' performance on assessments, quizzes, tests, and exams
- Course interaction data, analysing user interactions linked to multimedia elements, such as video impressions, clicks on interactive points, and participation in discussion forums or chats
- User feedback, gathering qualitative data from trainees regarding course structure, content, instructor delivery, administrative support received and the overall learning experience
- Certifications achieved, tracking the number of trainees who complete certifications, which information needs to be reported to the regulator on a biannual basis
- Dropout points, identifying common trainee exit or courses abandonment, identifying potential areas of course design improvement
- Trainee Demographics, identifying the diversity of trainees, job roles, seniority, and other demographic aspects, used to tailor and improve learning experiences

In addition, the implementation of ongoing monitoring established a feedback loop that supported the growth and capability of trainers and enabled a more complete profile of trainees particularly in case of corporate learning programmes. Data analysis techniques were crucial to support further transformation by visualising data turning it into meaningful insight and actionable recommendations. These insights supported evidence-based decision-making at the Academy at all levels of management. The analysis facilitated more targeted interventions and driven continuous improvement efforts within all the training programmes offered.

5.8 Implementation a new quality framework

The Academy's operating status as a licenced institution required the establishment of a quality framework in compliance with established national training quality assurance standards. Embracing the Academy's continuous improvement philosophy, the quality assurance evaluation employed a participative review approach following a series of lead questions for each process evaluated, as shown in Table 6.

Quality assurance lead questions	
Purpose/s	What is the Academy aiming to achieve?
Reason	Why are we doing it?
Method/s	How are we doing it?
Optimisation	Why is the developed model identified as the best way of doing?
Effectiveness	How do we know it works as intended?
Improvement	How can we improve it?

Table 6 Quality Assurance Lead Questions (Bollaert, A. 2014).

The approach chosen was to initially establish the design of the internal quality assurance outline in terms of standards with subsequent evaluation of the newly implemented Academy business model. The quality evaluation involved a systematic process assessment that emphasised collaborative team review and created an environment where measurement was employed in a more effective manner.

The appraisal entailed a meticulous examination of existing documentation processes to pinpoint any areas needing improvement. In my role as a practitioner researcher, I facilitated a series of technical focus groups, guiding the team through each changed process and digital workflow. A total of 4 groups met consistently on a 2-week sprint cycle to design and develop the respective processes. The technical focus groups were headlined as follows:

- Trainee Administration, Progression and Public Information provision
- Design and approval of training programmes and Quality reporting
- Trainer management and availability of learning resources
- Information management, technical support and design of digital content

This comprehensive review in terms of quality design encompassed a thorough assessment of all policy areas forming part of the framework in line with the recently established business model. This entailed updating and developing existing policies and procedures, as well as introducing fresh policies in new areas of business. The evaluation method applied to the design of new processes was an important opportunity to consolidate the learning and freeze the new process.

In line with the EU Quality Assurance outline the following Academy standards and the extent of change required (RAG) was established as part of the quality framework process (refer to Table 7).

		major changes required	minor changes required	few to no changes required
Standard 1 ●	Standard 2 ●	Standard 3 ●	Standard 4 ●	Standard 5 ●
Policy framework for internal quality assurance	**Institutional probity & organisational design**	**Design & approval of training programmes**	**Trainee-centred learning, assessment**	**Trainee admission, progression, & certification**
Standard 6 ●	Standard 7 ●	Standard 8 ●	Standard 9 ●	Standard 10 ●
Management of trainers & expert staff	**Learning resources & trainee support assets**	**Information management tools & systems**	**Public information open to the community**	**Ongoing monitoring & periodic review**

Table 7 - Quality Framework Standards

Each standard contributing to the internal quality framework, supported the Academy in establishing a more trainee-centric model which aligned with the Vision. The new Academy model presented a more engaging way of interacting with the business and trainer community having established a standard way of learning from other organisations both within and outside the PwC network. While internal quality standards are important, it was equally important to benchmark against external standards. A systematic approach to quality benchmarking was a key element in relation to this project's evaluation stage.

The implementation of an internal Academy quality framework was based on the Erasmus+ reference guide[3]. This guide is one of the deliverables of the international cooperation initiatives for licensed training providers within the European Union and serves as a basis for the development of Internal Quality Assurance Policies across many European Member States. An outline of all the policy areas is listed in Table 8 to follow.

Internal Quality Assurance Framework (IQAF) – Erasmus+ Step by step Guide to Internal Quality Assurance	
Standard 1	Policy framework for internal quality assurance
Standard 2	Institutional probity & organisational design
Standard 3	Design and Approval of Training Programmes
Standard 4	Trainee-centred Learning and Assessment
Standard 5	Trainee Admission, Progression and Certification
Standard 6	Management of trainers & expert staff
Standard 7	Learning resources and trainee support assets
Standard 8	Information Management
Standard 9	Public Information open to the community
Standard 10	On-going Monitoring and Periodic Review

Table 8- Internal Quality Assurance Standards

[3] https://mfhea.mt/wp-content/uploads/2021/03/Internal-and-External-Quality-Assurance-in-Further-and-Higher-Education-1.pdf

The design of the quality framework involved the documentation of the processes and procedures set up as part of the new model. The implementation of the framework was completely orientated toward the optimisation and coherent use of the tools within the new digital environment. The quality framework implementation process supported the institutionalisation of new practices and as a result, helped in refreezing the new learning habits developed in line with the new model. This aligns with Lewin's Change Management Theory (1946) about the stages of change on organisational change (refer to Section 2.2). In line with Lewin's theory this follows the initial unfreezing stage which often is the most challenging as individuals naturally resist change, followed by the transition phase when the actual change is implemented. The implementation of the quality framework as part of this project guaranteed that the new business model at the PwC's Academy was set to deliver high-quality training to its trainees.

The implementation of the quality framework was accomplished in the last four months of the implementation through a systemic review and evaluation of all the new processes introduced by holding technical workshops and focused groups engaging different Academy team members based on role or function and depending on the area under evaluation. This approach became a point of convergence on the necessity for more agile and effective methods of conducting reviews and assessments.

The development of the quality framework served as a standard for all team members ensuring a shared understanding and reinforcing a quality-driven culture within the Academy. The approach taken during the implementation connected the development of the Internal Quality Assurance Framework (QAF) to the new PwC's Academy Policy and associated Standard Operating Procedures (SOPs) as an integral part of the framework.

The quality system was fully digitalised and the integration flow is shown in Figure 40.

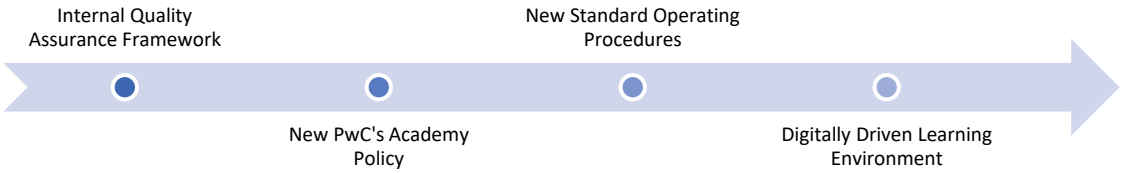

Figure 40 - PwC's Academy Quality Approach

The creation of a comprehensive quality framework facilitated the organisation of the various changes associated with service provision under the Academy's renewed business model. The framework was formalised following thorough consultation to ensure that all service segments aligned with the critical

principles of this framework supporting shared knowledge and value creation. For each standard represented within the internal assurance quality framework, a three-step review was followed with every focus group, starting with the enquiry that was essential to develop a complete product backlog, followed by validation and development at every sprint session and as a final stage the consolidation of every policy. Every policy aspect was catalogued in accordance with Figure 41 and tagging each area as "needing an update" or "new" policy design. I assumed the process and product owner role whereas every member of each focus group investigated specific processes to get an articulated picture of how the Academy team interpreted the process flows.

Standard 1	Standard 2	Standard 3	Standard 4	Standard 5	Standard 6	Standard 7	Standard 8	Standard 9	Standard 10
Standard title · Main Policy · Sub Policy · Updated policy · New policy									
Policy framework for internal quality assurance	**Institutional probity & organisational design**	**Design & approval of training programmes**	**Trainee-centred learning & assessment**	**Trainee admission, progression & certification**	**Management of trainers & expert staff**	**Learning resources & trainee support assets**	**Information management tools & systems**	**Public information open to the community**	**Ongoing monitoring & periodic review**
Overarching policy for quality including training & assessment	Policy defining Academy Committee terms of reference	Programme design policy	Trainee assessment policy	Trainee lifecycle policy	Trainer engagement policy	Training resources policy	Data & information management policy	Public information management policy	Continuous training improvement policy
		Certification design & approval sub-policy	Formative assessment sub-policy	Course booking and trainee onboarding sub-policy	Trainer preparation sub-policy (TTT)	Student support policy	Management of user data sub-policy	Prospective applicant management sub-policy	Programmes feedback sub-policy
		Trainee consultation sub-policy	Summative assessment sub-policy	Supporting trainee progression sub-policy	Trainer appraisal policy	Instructional media sub-policy	Certification retention sub-policy		
		Certification management policy	Anti-plagiarism policy	Certification administration sub-policy	Trainers' evaluation criteria & performance objectives sub-policy		Management of course profile data sub-policy		
		Certification creation, approval & issuance sub-policy	Trainee formal request handling policy	Recognition of prior learning policy			Management of course content data sub-policy		
		Custom training design policy	Complaints handling sub-policy				Management of annotations & feedback data sub-policy		
		Specialised training sub-policy	Appeals handling sub-policy				Version control sub-policy		

Figure 41 PwC's Academy Quality Framework

Figure 41 exhibits the ten standard-based internal quality assurance framework that served as baseline for assessing the areas of business for completeness in achieving its business objectives as part of this transformation project. The framework brings together the quality assurance guideline provided by the regulators in the space of training, the internal quality assurance framework and the newly developed operating procedures as part of the new working model.

5.9 Summary of implementation

The implementation process encountered inherent challenges that emerged on a regular basis. Successfully addressing these challenges demanded meticulous analysis and strategic planning. The presence of strong leadership and the adoption of a comprehensive approach to the overall Academy business transformation was central to meet project objectives. A diligent approach throughout the diagnosis and design stages, paved the way to anticipate a number of challenges, empowering me as the project leader to proactively tackle most obstacles early on in a collaborative manner. This approach helped me and the team to positively transition towards a renewed Academy model that embraced a digitally empowered future.

CHAPTER 6 – Project and Change Management Evaluation

6.1 Approach to project evaluation

This chapter presents the final outcomes of the project holistically evaluated against its aims and objectives as well as against the effectiveness of the project components. A combination of qualitative and quantitative methods was used. Where data was not available due to emerging developments a personal evaluation is provided resulting from my own observation as leader of the project and insights shared by the team. Chapter 8 will provide a personal reflection on the entire process and alternative approaches to the change transformation process and how it could have been done differently.

6.2 Evaluation of Learning Management System (LMS) take up

The review of the learning management platform as described in 5.5 introduced a comprehensive digital change of the entire trainee lifecycle, encompassing administrative coordination across all training areas, from marketing to booking, training registration, enrolment, and trainee management. The transformation was implemented successfully and a range of digital tools were introduced to enable the redesign of training and the implementation of innovative approaches to learning and engagement. The Academy team was directly involved in integrating learning assets of diverse types, designed to enhance the efficiency of achieving new learning objectives and overall effectiveness. Along the project implementation I could observe the development of high-quality multimedia components, new interactive elements, and online evaluation tools being used by all the team in a captivating manner. Furthermore, the team was now able to customise e-learning packages for several practitioner training fields that formed part of the Academy's portfolio.

As demonstrated in Figure 42, the adoption of the PwC Academy's LMS registered consistent incremental growth, with approximately ten thousand trainees registering within the first year of operation alone. Throughout the first year approximately 18% of the enrolled trainees were following corporate training programmes, which amount increased to close to 48% by the end of the project. Along the project duration, subscription rates remained consistently positive, with a gradual upward trend indicating an approximate increase of four thousand trainees over any six-month period. This trend underscored the successful establishment of a training service offering at the Academy that was purposefully designed to align with a digital mindset and meet the evolving needs of learners.

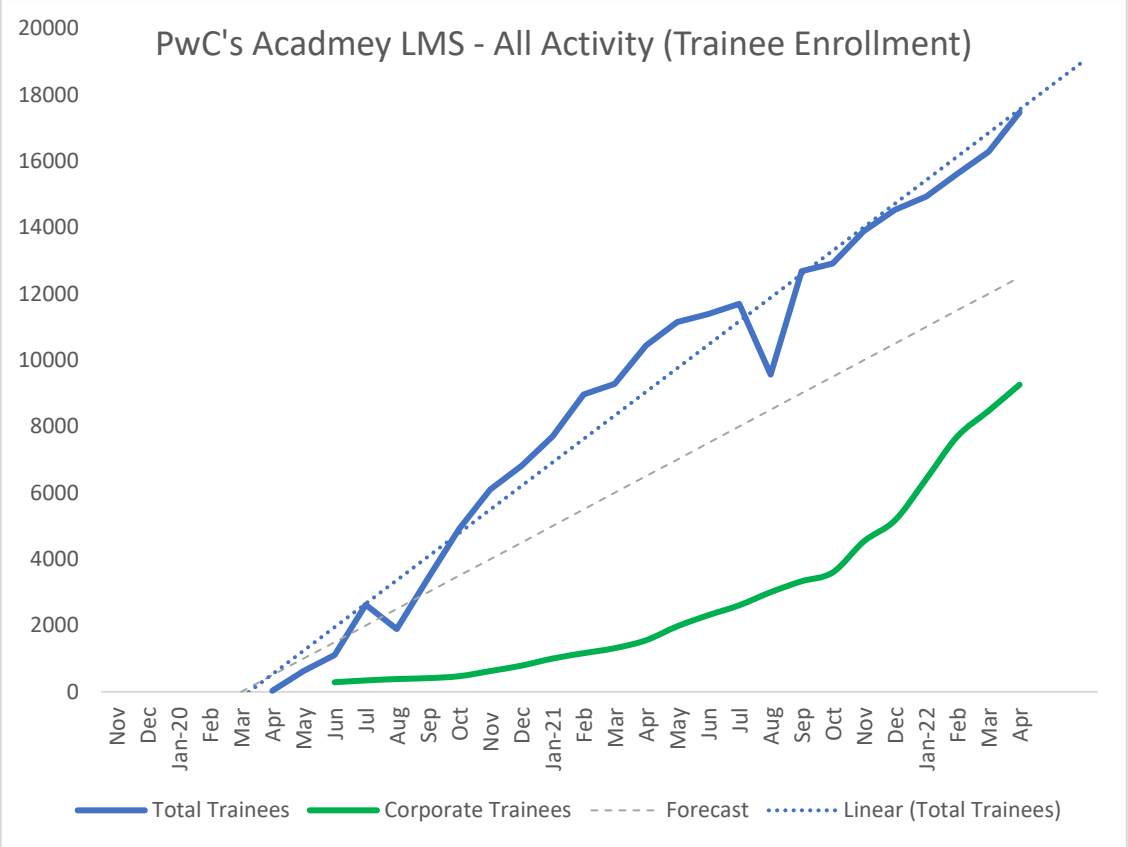

Figure 42 - PwC's Academy LMS Activity Growth

6.3 Evaluating Community feedback

The community event (described in 4.2) was designed to develop a collaborative approach, providing trainers with an opportunity to come together, interact and contribute information to help understand better the current and future training trends. Most of the valuable insights gathered contributed directly to the diagnosis and planning stage of this project.

The event managed to bring to centre stage the transformation challenges related to traditional teaching, training practices, anxieties about innovative and learner-cantered approaches. I observed that the audience was highly influenced by various factors such as advancement in technology, research in educational psychology, and shift in societal expectations.

The design of the event enabled a continuous contribution by the audience via various channels such as the interactive questions including related comments, with the same questions enabling to steer the interaction around the panel discussions as well as upvoting of comments and suggestions by all the participants. Upvoting a question, comment or suggestion was an easy and visible way for trainers to show that they had agreed or were supporting a participant's contribution that was made and

indicating priority. A total of 463 comments, suggestions and feedback statements were posted during the event.

I observed that the interactions and comments to follow facilitated the exchange of knowledge and expertise among trainers, as they could easily post queries, seek answers, and share their own insights, creating a valuable information repository. In addition, I noticed that many trainers were after solutions to specific issues or problems where other community trainers, including event experts, provided a number of helpful responses, leading to an effective problem-solving approach. I could note that the event developed a sense of community at a particularly challenging time where trainers could collaborate in a highly representative setting whilst supporting one another. I could also observe that trainers faced with similar challenges would readily connect, share experiences, and offer advice, creating a supportive environment.

The trainers appraised the overall experience of the community event as very positive, with the content meeting or exceeding the expectations of the audience. In addition, the trainers considered the speakers' knowledge as well as the presentation skills as also being very positive. Another positive aspect was the user-friendly of the event platform enabling the speakers to engage and hold the interest of the audience. Towards the end of the event, a 4-scale feedback survey was carried out with the audience with the outcomes outlined in Table 9 below:

	★	★★	★★★	★★★★
Overall event experience	0.7%	3.3%	22.9%	73.1%
Speakers' knowledge and delivery	0.4%	4.1%	17.4%	78.1%
Ease of use of the digital platform	1.2%	3.6%	21.4%	73.8%
Audience engagement and interaction	2.4%	5.1%	25.9%	66.6%
Time allocated for sessions was right	4.6%	6.2%	34.7%	54.5%
Likelihood of attending a future event	0.9%	2.1%	12.6%	84.4%

Table 9 - Community Event Feedback Survey

The trainers appraised the community event's overall experience as being positive and constructive, expressing that the content surpassed the audience's expectations. Furthermore, the trainers considered the speakers' expertise, international experience and presentation skills as being very high. Additionally, they highlighted the event platform's user-friendliness, which facilitated effective engagement between the speakers and the audience, ultimately sustaining their interest throughout the event. On a less positive note, the audience remarked that the event's pace allowed limited opportunities for free trainer networking, which over time became a norm with most trainer events. An additional challenge stemmed from the significant number of attendees, as it marked the largest

online event organised by the Academy since its inception. Consequently, managing individual feedback, comments and responses became challenging due to the sheer volume of participants.

With regard to the specific content raised during the event, a formal evaluation was not carried out. The following is a summary of the assessment and observations gathered from both myself and the Academy team. An opening observation about the trainers' event was that it placed significant emphasis on community engagement and explored various aspects pertaining to the potential and extent of technology integration in training and learning. The trainer's view on the evolution of learning approaches and perceptions, with a specific focus on the impact these changes have had on established learning process. The trainers acknowledged the benefits that the leveraging of technologies can bring in terms of innovation, learner-centric experiences, promotion of continuous skill development and knowledge acquisition. I noted that there was consensus across the audience that the right combination of technology and learning had the potential to transform education and training on a large scale, empowering individual trainees and driving a new workforce development that could thrive in the digital age. The interactions and dialogue explored the changes in the methods, strategies, and attitudes towards learning over recent times.

In terms of its purpose in enabling me to refine the vision for the project, this event helped me value better new learning practices and emerging concepts that develop more inclusive environments that are conducive to embedding technology in training and learning. Another evaluative aspect was the technology impact from the viewpoint of individual trainers, considering their personal experiences and the evolution of their perceptions influenced by external factors. I sought to understand the changes in trainers' work and their perception of these changes within the profession, that would result from the adoption of a technology driven learning space.

Moreover, during this community session together with participation the Academy team, I explored the primary drivers for change and the need to learn new skills that could be attributed to both individual professional development and industry demands. In a context of an employee market, the individual interests of each trainee were evidently a more predominant and determining factor in terms of training enrolment when compared to the needs required by industry. This aspect was an important consideration in terms of the Academy model given that the clients of the Academy are both individual independent trainees as well as corporate client trainees. Whilst individual trainees pursue individual certified training, corporate trainee look more for upskilling and reskilling training journeys for various employee cohorts. In case of the latter, such training may also be part of mandatory training by the authorities regulating the specific industry.

The community session looked also into the specific technologies and digital tools employed in conjunction with novel training methods. The session allowed me to think through the various methods considered by trainers, including the utilisation of resource sharing tools, understanding of digital workflows, digital communication channels used between peers and trainees, understanding innovative teaching and training methodologies, and the extent of personalised digital learning experiences. The outcome of the community's contribution to the key aspects of training allowed me to determine the extent and impact of digital technologies in the learning domain. While understanding that the adequacy of available training methods for trainers and the accessibility of appropriate technology, tools, and resources is deemed important, it was clear that it was difficult to assess the specific relevance and impact of certain new technology adoption.

Furthermore, while recognising the significance of developing technology strategies within the training domain and developing effective training models that encourage innovation, the trainers shared that there was a lack of examples that could support their individual bespoke models. I noted that it would be more beneficial if specific case studies and successful implementations could demonstrate how the adoption of complete digital transformations in learning would influence the learning outcomes.

6.4 Evaluation of the Management perspective and data obtained

As described in section 4.4 and associated survey outlined in section 4.4.1, I noted that the applicability and effectiveness of the management evaluation in the context of the transformation project was effective in terms of the first steps of change where the top-down approach was prevalent. Analysing the management feedback was essential to inform the planning and implementation activities early on within the change project. The survey questions provided a simple approach with each question being tailored to the characteristics and nature of the project. I observed that the structured approach the gauge management perception mitigated individual biases that each management member might have developed due to frequent interactions with the Academy. The iterative approach was essential to address market changes and overcome the limitations encountered during implementation.

The approach was effective in devising and communicating a clear new Academy vision. Together with management, a review of the impact of the new vision in inspiring and aligning the team towards the desired change was effective. Aligning management perspectives contributed towards the integration and alignment of the vision with operational aspects, such as individual training experience, team coaching and mentoring, and employee performance management. This process proved to be effective in establishing ways of delivering the vision whilst considering the feasibility and effectiveness of the project in achieving the desired transformation and overcome barriers.

The survey ensured a comprehensive approach to assess and refine the change implementation strategy at the start of the project, ensuring alignment with the management's readiness, feedback, and vision for the new Academy. Referencing Kotter’s 8 step framework for the survey structure was a significant enabler for this survey.

6.5 Evaluation of the Team Development

As described in section 4.5 the assessment of the Academy team development as a result of project implementation included both observation and qualitative review. This review aimed to establish the active involvement of all PwC's Academy team members in various aspects of knowledge as outlined in 4.5.2.5. 4.5.2.6 and 4.5.2.7. The quantitative evaluation was conducted at the beginning and repeated at the end of the project to assess how well the key aspects of the team development in support of the change had been achieved. The results of this are described below.

As described in 5.5 and 5.6, the transformation process included the implementation of a series of targeted team learning workshops aimed at developing individual growth and supporting the success of the overall transformation. The outcome of these workshops contributed directly to the transformation of the training services model in line with the new Academy business model as described in 5.7 Concurrently, work groups focused on different technical aspects crucial to the transformation's effectiveness. I observed that the workshops provided a unique opportunity to discuss, explore and develop proficiency in various digital areas involved in designing, developing, and delivering training programs. The training development workshops took place on a weekly basis and covered essential elements, such as creating and hosting digital or blended learning sessions, designing interactive quizzes, utilising instructional design tools, creating interactive content and training videos, incorporating embedded surveys, automating mass event planning and calendaring, mastering content management and information sharing, configuring assessments, and managing workflows.

It was observed that these elements empowered each team member to create comprehensive digital learning material or support the trainee using digital training sources. Throughout the learning process, both individual and groupwork in small teams of two or three members was encouraged to strengthen the team's collective knowledge. Another approach that led to positive outcomes was that each team member was assigned specific learning tasks aimed at developing personal growth and enhancing the Academy's team capabilities.

The team learning methods used worked well for the team and provided a positive comprehensive reskilling experience to every team member by having individual learning transferred back to the team through sharing. This approach was a way how individuals learnt new concepts, applied their knowledge, and actively shared their learning with their fellow team members. The transfer of expertise and sharing of experiences drove the team's development as the confidence of each employee grew from one week to the next. Given that the team consisted of professionals who had

initially grappled with the competencies needed to effectively make best use of all the digital tools contained within the new platform, an individual mentoring approach was employed to support some individuals. The mixed method of mentoring and coaching proved to be an effective strategy in developing holistic growth among team members.

6.6 Team evaluation: A Statistical analysis of the state before the project and after its completion

The central focus of this project was to assess the Academy transformation through its team, recognising the pivotal role of the team as both initiators and active participants in the change process. The evaluation sought to gauge and analyse the impact of this project in terms of knowledge and learning outcomes. The evaluation of the team's professional knowledge development yielded valuable insights into the team dynamics and the reception of the change project by individual members. Emphasising the team's embracement of change remained a crucial focus during the project, with a well-structured and logical approach followed throughout the transformation process. The analysis of the variance between pre- and post-surveys, as illustrated in tables 4 and 5, aimed to assess the range of team outcomes, encompassing both positive and negative aspects.

This quantitative assessment aimed to establish a basis for measuring and interpreting the variance in each area to establish the effectiveness of learning within the team. The t-test to follow assessed the impact of the project on team processes, learning, and knowledge. The change in team responses in the eight thematic areas, which each consisted of five questions were assessed. Statistical analysis determined the dispersion measure for each area of observation, assessing the degree of closeness of responses in relation to the mean.

As a final step in assessing the Academy ability, a single component analysis of variance (ANOVA) was used to conduct a regression analysis and determine whether the means of the pre- and post-project survey responses significantly differed from one another. As illustrated in Table 10, the F value recorded was significantly higher than F critical value, and hence this led to the rejection of the null hypothesis. The statistic was one of the significance measures determined by the F Test. In addition, the F statistic's p value plainly indicates that there is a negligible probability that the outcomes occurred by chance. In the numeric tabulations below, N represents the number of single interactions, whereas the p-value indicates the likelihood of observing the same differences in the group means should there be no actual difference in the population.

ANOVA: Single Factor

SUMMARY

Groups	*Count* [N]	*Sum*	*Average*	*Variance*
Pre assessment	40	122.11	3.053	0.161
Post assessment	40	157.44	3.936	0.110

ANOVA

Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups[4]	15.606	1	15.606	**115.21**	5E-17	**3.96**
Within Groups[5]	10.565	78	0.136			
Total	26.171	79				

Table 10 - Analysis of Variance for the two tests of the Academy team

t-Test: Paired Two Sample for Means

	Pre-Project Assessment	*Post-Project Assessment*
Mean	3.0528	3.9361
Variance	0.1608	0.1101
Observations [N]	40	40
Pearson Correlation	-0.2809	
Df	39	
t Stat	**-9.5025**	
t Critical two-tail	**2.023**	

N represents the number of single interactions
't' stands for the statistic used in the hypothesis test: determining if the difference between the means of the two results is significant

Table 11 - t-Test for the two tests of the Academy team

By examining the findings of the two-tail evaluation, it was determined that given the 't Stat' obtained was less than the 't Critical', the null hypothesis could safely be rejected (Table 11). The 't' value represents the statistic used in the hypothesis test determines the significance between the difference in means of the two results. The outcomes enabled me to conclude that the Academy team recorded significant change when comparing pre to post assessments.

Figure 43 displays the dispersion of variance for all observed areas by visualising the spread of the mean variance using the pre-assessment mean score as the baseline for the purposes of evaluation and benchmarking. This illustration makes it easier to visualise the clustered relationship between the various survey categories in terms of variances and the relationship between one question and another. This representation sets the first round of scores as the reference criterion for this review.

[4] The total variation between each group mean and the overall mean.

[5] The total variation in the individual values in each group and their group mean.

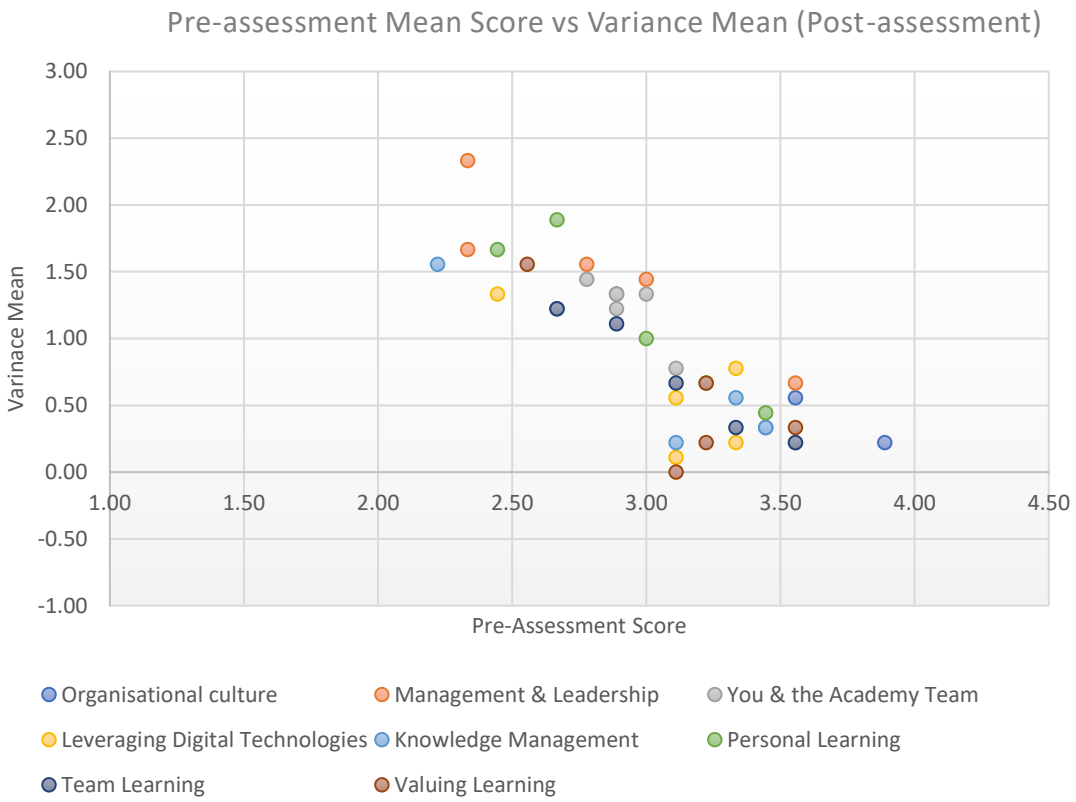

Figure 43 - Analysis of Variance pre to post scoring

To evaluate the results achieved by the project, a t-value was calculated to assess the variance between the reported scores. The analysis revealed a noticeable difference in the data between the two sets of information. This statistical approach, known as a dependent sample t-test, was employed to determine if the mean difference between the two sets of observations was zero. The Academy team was assessed at the start of the project and post implementation, resulting in two sets of observations that were analysed using a paired sample t-test at the end of the project. Employing a paired sample t-test, I was able to determine the impact resulting from the project implementation. This variance was measured by scoring both before and after the completion of the team transformation and connected learning activities. Taking a statistical approach, the paired t-test allowed for the testing of either the null or an alternative hypothesis.

By conducting the paired sample t-test, the evaluation quantified the difference between the initial and final scores establishing the difference was statistically significant. This statistical analysis provided a solid foundation for drawing conclusions about the impact of the project change on the team's knowledge and learning. The null hypothesis anticipated that there would be no material difference in the true average between the paired data. Conversely, the alternative hypothesis assumed that the true average difference between the paired samples was not zero, indicating that

the transformation project would have influenced the Academy team within the context of the new business model. The assumptions for the paired sample t-test were formally qualified as follows:

- The null hypothesis (H_0) assumes that the true mean recorded variance (μ_d) is equal to null.
- The alternative hypothesis (H_1) assumes that μ_d is not equivalent to null.

In the context of this project the expected mean difference, was expected not be null. The null hypothesis value represented a scenario where no effect on the team learning and knowledge attributes as a result of this project would be registered. The mathematical arguments of both the null and alternative hypotheses are expressed below:

- $H_0: \mu_d = 0$
- $H_1: \mu_d \neq 0$ (two-tailed)

The t-value was a measure to ascertain whether there existed a substantial disparity between the data obtained at the beginning of the journey and the data gathered at the conclusion of this team learning effort. A higher t-score would indicate a significant divergence in responses, while a lower score would imply a minimal difference in responses before and after the change process. This conclusion could be drawn from the evaluation since the questionnaire covered a range of essential topics, such as organisational culture, management and leadership, individual experiences within the Academy team, utilisation of digital technologies, knowledge management, personal learning, team learning, and the recognition of learning.

As a parametric procedure, the paired sample t-test evaluation assumed the following:

- That continuous data obtained could consider any value within the established range
- The survey data obtained was both numeric and continuous
- The observations made were independent of one other
- The dependent variable did not contain data considered to be an outlier

Examining in detail the areas of team focus identified by the questionnaire in greater detail, it became obvious that this transformation initiative had a positive impact on the overall average score, resulting in an overall higher average score at the end of the project.

6.6.1 Team learning evaluation grouped by cluster

6.6.1.1 - Organisational Culture

The average scores related to organisational culture increased from 3.29 to 4.02, representing a 0.71-point increase in mean score.

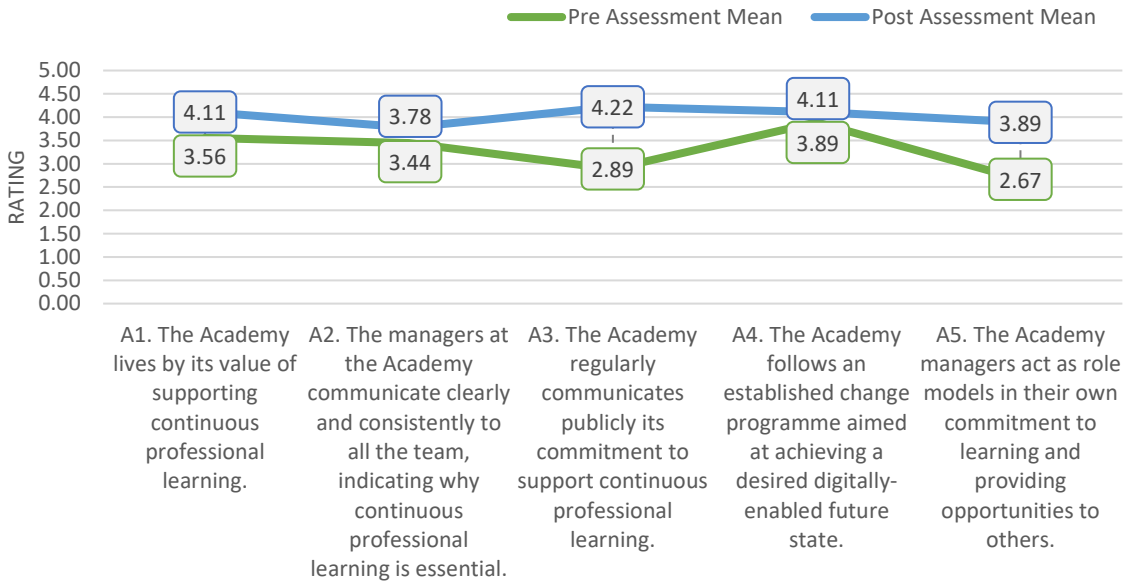

Figure 44 - Organisational Change – Scoring analysis

In terms of organisational culture, the questions covered a wide range of features and characteristics, such as clear and consistent communication about learning, dedication to professional development, change management oversight, and opportunities for leadership, amongst others. Figure 44 illustrates the scoring system in greater detail. The most significant positive variance was found in the area of communication surrounding continual professional learning, with a difference of 1.33 points between the assessment intervals.

6.6.1.2 - Management and Leadership

The average scores in the management and leadership area reported a significant positive increase in four-fifths of the questions presented in the questionnaire. The questions as part of this focus area dealt with the supportive learning culture, aspects of responsibility and turning the blame culture into

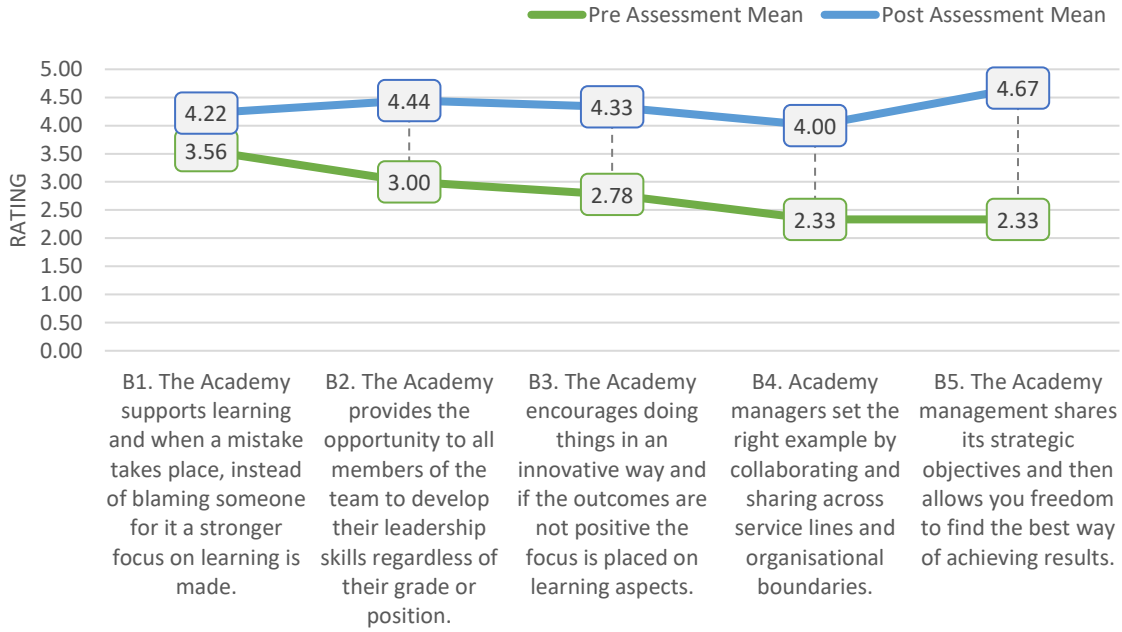

Figure 45 - Management and leadership – Scoring Analysis

increased support employee motivation. The questionnaire probed also the opportunity made available to all members of the team to develop strong leadership skills irrespective of their grade or position, particularly those forming part of the guiding coalition. Another element related to encouraging every member of the Academy to embrace innovation across the work landscape and learn how to become more innovative. The scoring around these two elements has seen a favourable improvement, with an average score rise of 1.44 and 1.56 points, respectively, indicating a positive outcome. This transformation project was a catalyst in helping the team come together with management and work more closely. Two additional questions that resulted in a more positive rating outcome related to managers setting the right example within and outside the Academy boundary and sharing of strategic objectives allowing every individual to find the best way of achieving results through increased strategic openness. As evident in Figure 45 the ratings related to these two areas have attracted higher ratings in both instances. Strategic openness for the team has had major significance with the rating score increasing by 100%.

6.6.1.3 - You and the Academy

The questions that were addressed at individual team members in the context of the Academy as a learning supportive employer resulted in consistently higher scores across all questions. As illustrated in Figure 46, the mean score across all responses resulted in an overall average increase of 1.22 points. The individual question recording the highest positive variance, with an overall increase of 1.44 points was C2, where every individual within the team was encouraged to benchmark oneself against the standards set by the Academy. The series of questions gauged the learning opportunity and whether the Academy provides the right learning context that enables learning. The aspect that registered the lowest variance related to the time availability to personal learning with the team. Despite the fact that time availability is a genuine challenge in any fast-paced environment such as the Academy, this aspect still managed to gain in terms of importance between the pre and post assessment periods.

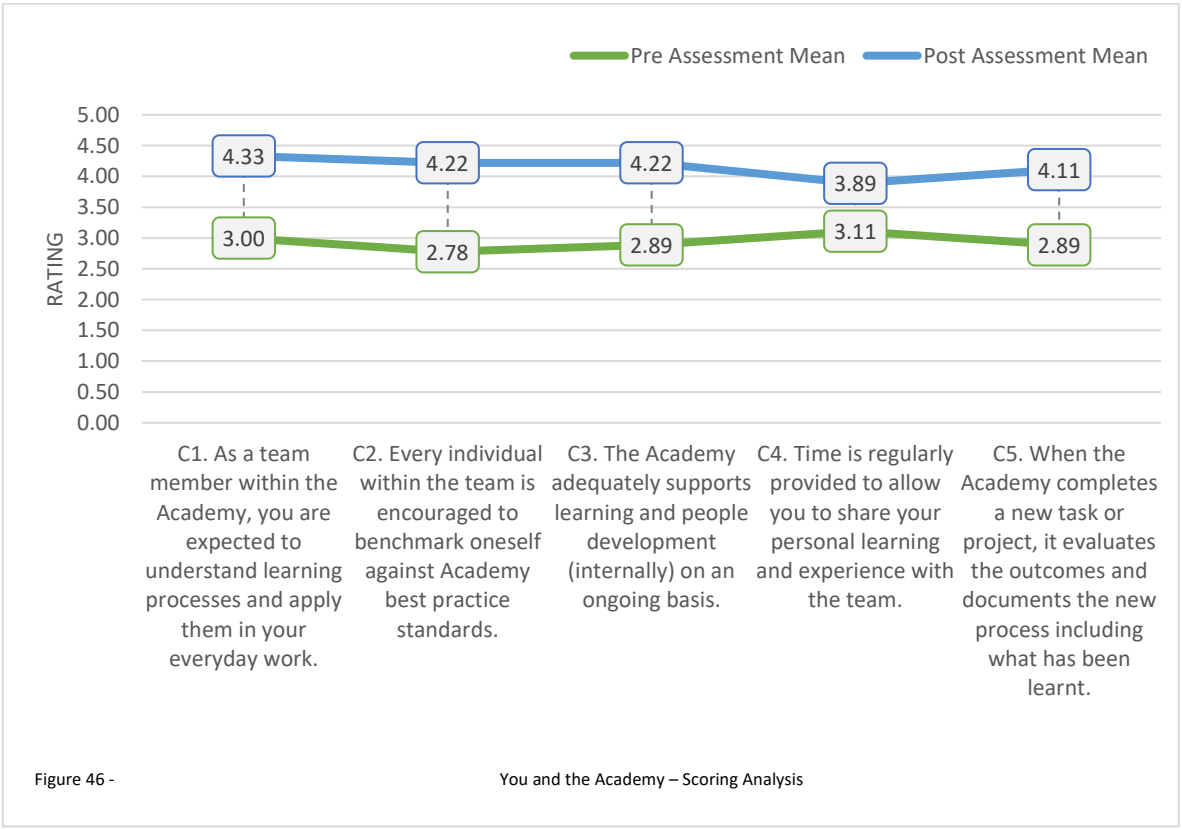

Figure 46 - You and the Academy – Scoring Analysis

Another significant outcome that was identified at post-assessment stage related to the evaluation of outcomes that resulted in the recording of new procedures that enhanced team learning. This transformation project provided a plethora of learning opportunities for the entire team on a variety of different levels. The increase in score from 2.89 to 4.11 demonstrates unequivocally that the team recognises the importance of establishing a formalised sharing of learning.

6.6.1.4 - Leveraging Digital Technologies

One of the underlying objectives of this project was to introduce and leverage the use of digital technologies to support the development across all the services offered by the Academy. As illustrated in Figure 47, the comparison of scores between the pre and post evaluation, significant improvements had occurred in some areas of technology enablement, while only lesser changes were recorded in other aspects. The average change in score between the pre and post assessment for this series of questions was 0.69.

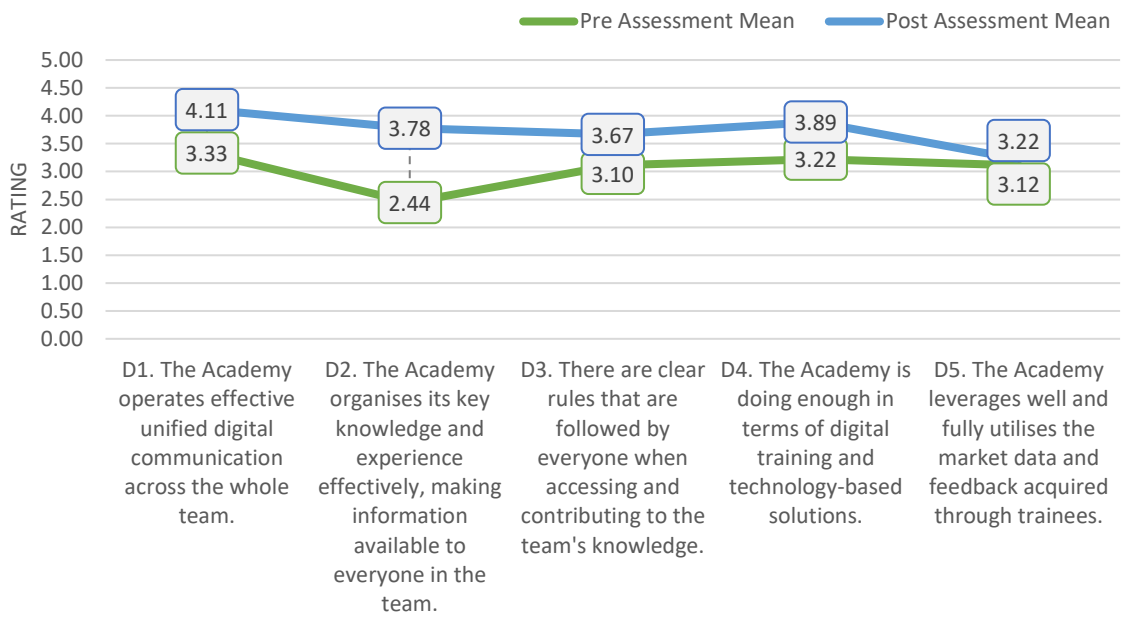

Figure 47 - Leveraging Digital Technologies – Scoring Analysis

The most significant shift was noted in question D2 specifically around the way the Academy organises its core expertise and experience, making it readily available to everyone on the team. On the other hand, the way the Academy makes use of market data and feedback acquired from trainees attracted a relatively lower shift in score between the pre and post assessments. The reasons for this minor shift in scoring may be attributed to the consistent dependency on other systems operated by the firm, particularly training market related information.

6.6.1.5 - Knowledge management

The sequence of questions pertaining to knowledge management resulted in much higher overall scores across four fifths (80%) of the questions as displayed in Figure 48. Important higher scores were

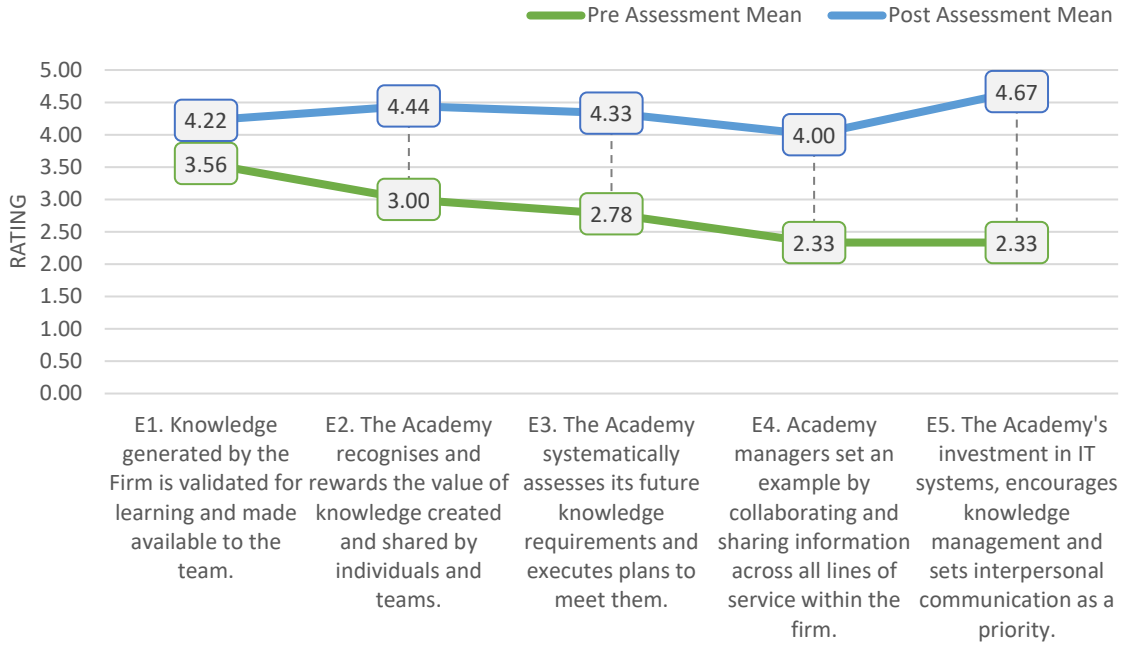

Figure 48 - Knowledge Management – Scoring Analysis

logged for aspects such as how individuals and teams who generate and share knowledge are recognised and rewarded by the Academy for their contributions. The scorings also recognise the Academy's conduct in applying thorough assessment of its future knowledge requirements and how it develops plans to achieve such goals. A similar statement may be made about the function of Academy managers in facilitating collaboration and knowledge exchange across all lines of service within the organisation. The results also recognise the Academy's investment in information technology systems, which supports knowledge management and lays a strong emphasis on interpersonal communication.

6.6.1.6 - Personal Learning

Reporting different scoring shifts across the question set on personal learning indicated that the transformation project left its mark on the Academy team. Undoubtedly, one of the aspects that has experienced a significant positive shift is the ongoing drive by every team member to listen to clients and develop better ways to do the tasks that each individual performs on a daily basis, independent of his or her position. The second question resulted in a seventy one percent gain in overall points.

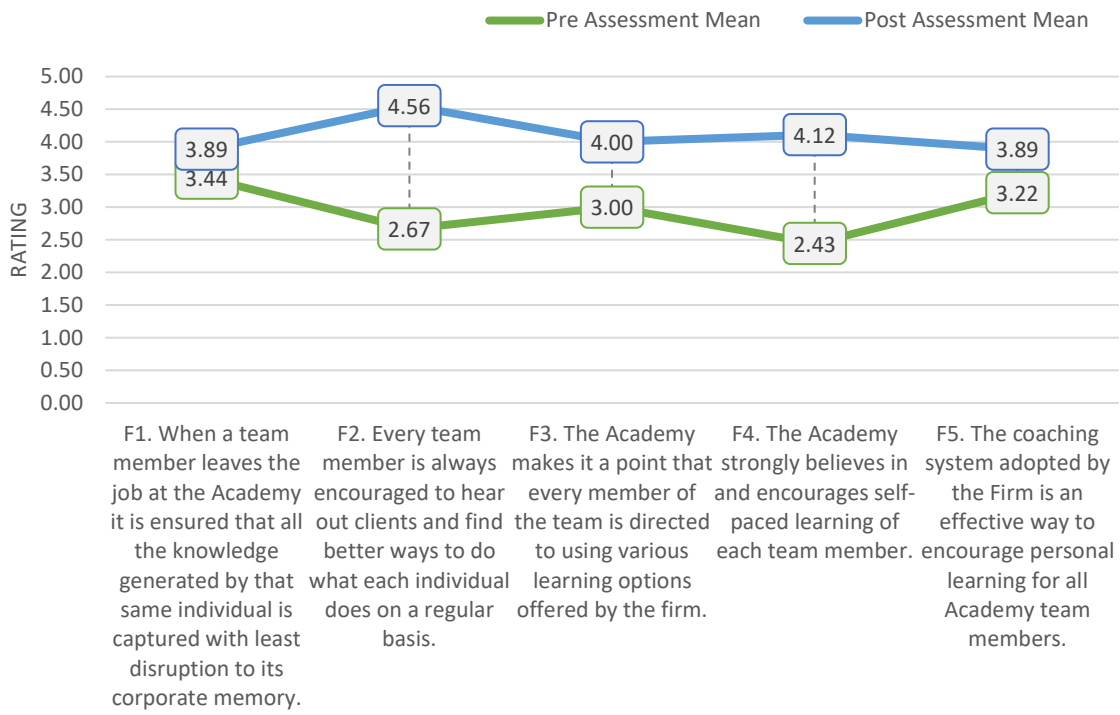

Figure 49 - Personal Learning – Scoring Analysis

As visible in Figure 49, stable scoring with a marginal increase was recorded for both F1 and F5. The first questions refer to a situation where a team member departs his or her position at the Academy, it is assured that the information gained by that individual is captured with the least amount of interruption to the Academy's corporate memory as possible. In situations where the Academy makes it a point to encourage every member of the team to take advantage of the various learning opportunities provided by the firm and its global network, a marginal rise was also observed in scoring between pre and post assessment. On the other hand, a seventy percent score increase was registered for instances where every team member is encouraged to learn at one's own pace, a concept that the Academy passionately supports and believes in. As a result of the numerous innovations that occurred

during this transformation project, team members had numerous opportunities to learn how to engage with digital learning solutions at their own pace and in their own time.

6.6.1.7 - Team Learning

As illustrated in Figure 50, across the team learning queries have registered a positive variance with an average mean increase across all five questions being 23 percent. A positive note registered was that the average post-assessment score was 3.82, indicating that team members believed that the internal learning environment at the Academy had become conducive to their growth.

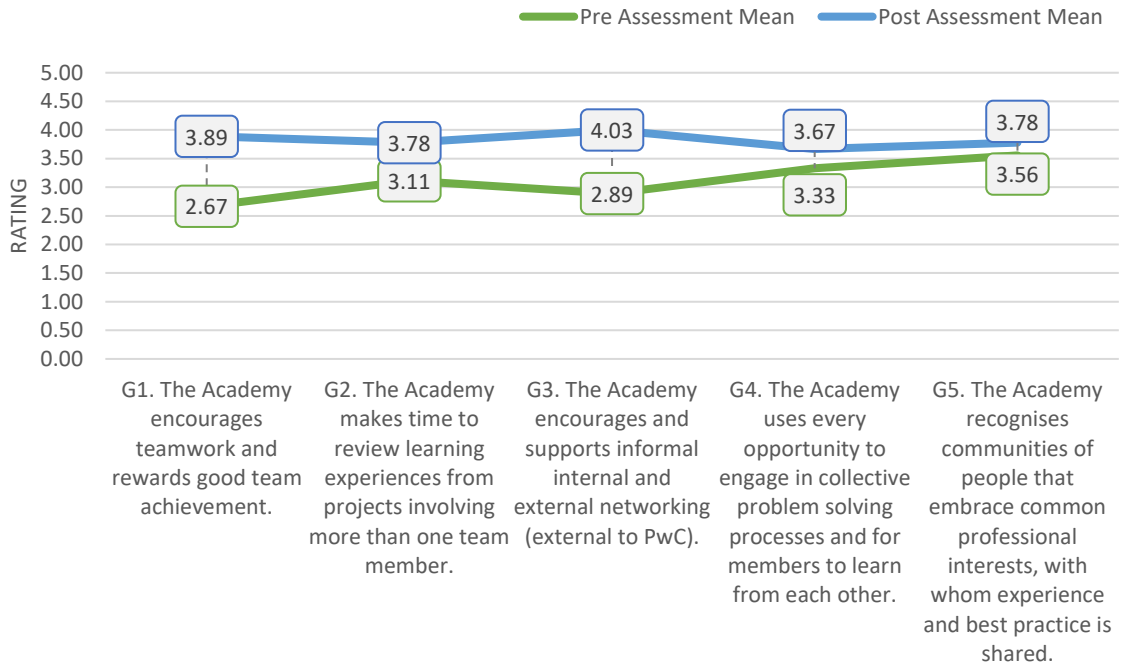

Figure 50 - Team Learning – Scoring Analysis

What stems out of these queries is that the team recognises the commitment of the PwC's Academy to promote teamwork, recognise and reward those who achieve success as a group. In addition, it was also noted that regular encouragement and support towards informal internal and external networking attracted the highest score variance, up by 40%. The transformation project helped to create broader stakeholder involvement coupled with digital tools that enabled the Academy to connect with as wider audience. This is also supported by a positive score linked to learning experiences from projects involving more than one team member.

The scores indicate also that the team at the Academy effectively uses every opportunity to engage in collective problem-solving processes enabling each member to learn from one another at every stage.

Also supporting this, is a framework for recognising and working with groups of people who share common professional interests and with whose knowledge and best practises can be shared in the future.

6.6.1.8 - Valuing Learning

The top variance between pre and post assessment of individual team members' learning value was taken into consideration by the Academy. As exhibited in Figure 51, this characteristic did stand out from all other questions in this space at sixty-one percent rise between evaluations, showing that the Academy operated effectively to instil a new culture that capitalises on the value discovered.

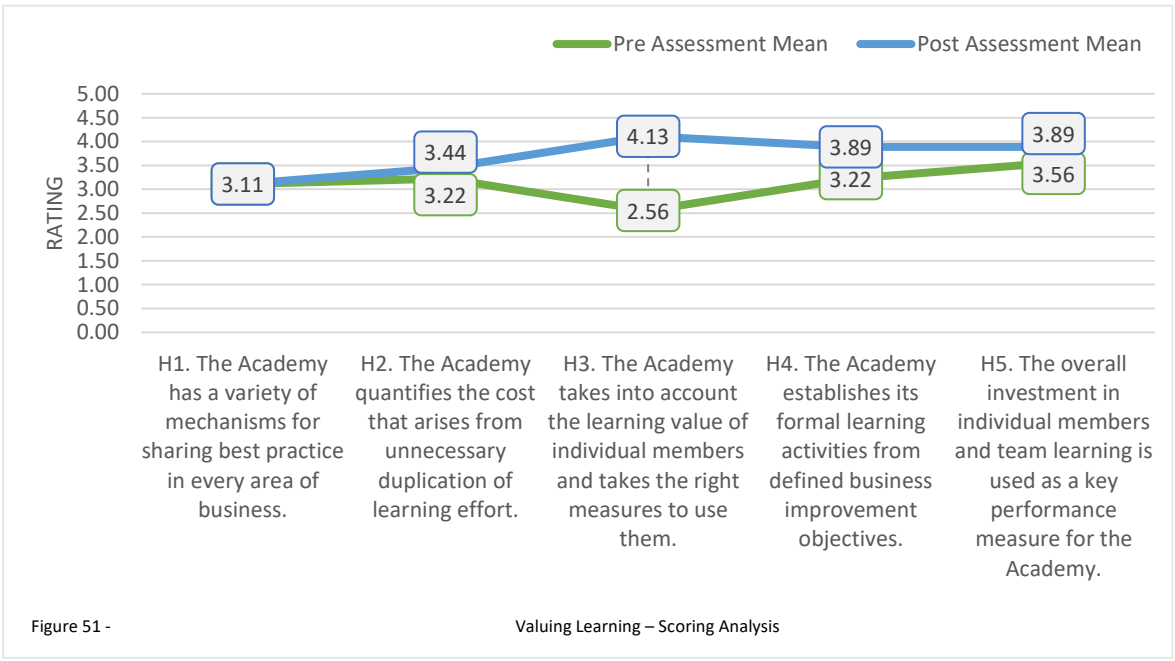

Figure 51 - Valuing Learning – Scoring Analysis

Considering the range of platforms for sharing best practise in every area of business of the firm, it came to no surprise that question H1 maintained the same scoring across the pre and post assessments. Similarly, the quantification of the cost incurred as a result of unnecessary duplication of efforts has also registered a slight change, which is also understandable as the Academy has always aimed to embrace lean operating models. Minor variations were also recorded in relation to the formation of formal learning activities based on clearly stated business improvement targets as well as the overall investment in individual members and team learning being used as a key performance measure for the Academy.

6.7 Evaluation of Project Outcomes

The project delivered benefits on a number of fronts. Most notably are the business aspects listed below:

- Overall administrative efficiency gains with estimated cycle-time improvement by 28%. This FTE-based saving was calculated by measuring the time taken to update course content, support trainees with latest information, onboarding of trainees, course management, attendance record sheets, trainee feedback evaluation as well as the preparation and dissemination of certificates linked to successful course completion.
- The introduction of a broad array of digital components and options as part of the new business model that enabled different learning opportunities coupled with dynamic course design.
- A trainee centric model that allowed for a higher degree of user personalisation based on data that was fundamentally the main contributor towards an average 12% increase in trainee satisfaction rates across all training areas.
- A robust set of new processes that embraced learning quality by design as opposed to a reactive adjustment.
- An Academy team that proved to have become more knowledgeable and agile, able to problem-solve issues more efficiently thus making the team more future ready.
- A net improvement in the preparation and management of trainers and experts engaged by the Academy to deliver training.
- The Academy's ability to respond swiftly to emerging challenges and opportunities.

6.8 Evaluation of Quality Framework

At the core of what the PwC brand always sustains was an unwavering commitment to quality excellence. The Academy team embraces this characteristic and continuously strives to exceed expectations and raise the bar for itself as well as the enrolled trainees. The new operational model introduced improved training assessment and evaluation, ongoing feedback mechanisms, enhanced administrative support, introduced a higher degree of learning mobility and accessibility whilst consistently delivering highest standards of quality. The project led to the enhancement and the redefinition of the former quality standards on the basis the initial Academy operating license was based on. This change project led to the introduction of policy updates in various aspects of business, with one third of the policies being new. The remaining two-thirds of the existing policy areas had to be revised to reflect the new digital learning model (refer to Section 5.8 - Figure 43).

The successful execution of project activities played a pivotal role in the development and implementation of an internal quality assurance framework. This framework marked a significant milestone in the Academy's journey, symbolising the official adoption of its new business model and a departure from the limitations of the previous legacy model. It provided in itself an ongoing evaluation of the success and sustainability of the change. The transformative nature of this project exerted a substantial influence on work dynamics and approaches across various business functions. The evaluation of the newly established Academy working model, encompassing a comprehensive review of all processes and practices, facilitated a thorough assessment of the project's outcomes. The project's impact on elevating the overall quality and effectiveness of training paved the way for the widespread dissemination of best practices throughout the firm. This process resulted in a shared understanding that was institutionalised across the team and formed the operating standard leading to the new business model's objectives and expectations. I noted that the review of established business procedures and the mapping of new process provided valuable insights into the Academy's opportunity for further enhancements.

To address overlapping policy areas of business within the framework a cross-functional team concept was used to encourage alignment of diverse perspectives and sharing of expertise. I noted that the team leader role within each group enabled guided discussions and ensured that all relevant aspects were covered. The header titles of the framework represented as key reference points guiding the development. Each focus group investigated the new model to identify areas of improvement incorporating leaner process into subsequent sprints to continually enhance the policy and quality standards.

The design of the quality framework took into account changes based on the evolving project deliverables. I observed that a structured process helped maintain clear business model documentation. Developing a good quality assurance policy meant it had to represent the Academy's values and strategy shared by the firm. The quality aspects took the form of a negotiated analysis amongst all stakeholders involved in the process of determining what is acceptable. The changes brought about by this project created an essential need to rethink the new quality policy setting that had to be listened to and heeded. The internal quality assurance around the new Academy model included all aspects of policy, system, and processes.

The quality assurance process was considered as a comprehensive management tool aimed at ensuring the realisation of additional value in response to the demands and expectations of stakeholders. Its primary objective was to achieve optimal effectiveness and efficiency while consistently seeking improvement.

CHAPTER 7 – Analysis, Conclusions and Recommendations

This chapter provides a summary of conclusions in relation to the organisational research objectives and the academic research questions. It will draw connections between the project experience, the information collected, and the review of the literature. This chapter provides an answer to the business problem identified and the connected research statement addressed by this study. The analysis and conclusions establish how the Academy's training business model was redesigned to increase learning effectiveness and trainee opportunities as well as meet the demands of present and future trainees. In addition, the chapter also identifies practical implications and recommendations for digital transformation in a learning environment arising from the project and the research surrounding it. It provides insights into potential areas for improvement, strategies for implementation, and suggestions for future research or further action.

7.1 Organisational Research Objectives (OROs)– Analysis of findings

The organisational research objectives identified in Section 1.7.1 are listed below.

7.1.1 Design and implement a new digital learning model (DLM) that meets better the needs of the learning market enabling the Academy to achieve its full potential - ORO 1

Establishing an effective and robust digital learning environment was a central priority of this change project. The implementation brought together a number of initiatives that enabled the Academy to better address the rapidly changing market needs whilst maximising its prospects. Taking a meticulous approach led to the delivery of a new DLM that enabled the team to quickly respond to new training challenges, market trends as well as corporate and trainee demands. It can be concluded that this objective was fully achieved through the full integration of all new processes and paved the way for an adaptive way of working that effectively catered to the evolving needs of the changing landscape. This is evidenced by the significant improvements in administrative efficiency estimated at 28% cycle-time improvement, trainee satisfaction rates up by an average of 12% across all training areas, and the organisation's ability to respond swiftly to emerging challenges and opportunities. The positive feedback received from key stakeholders, such as the Academy Committee further attests that the transformative impact of the new digital model and its alignment with the Academy's strategic vision was successful.

Devoting the right effort to plan the diagnosis and design stages of the project to an articulated level of detail greatly facilitated the implementation. The diagnostic research activities helped in the

identification of gaps and areas for improvement by contrasting the legacy learning model to the newly formed Academy vision. As outlined by Beckhard and Harris (1997) in this regard, the single greatest barrier to successful change is often the failure to devote sufficient time and attention to defining the end state before commencing change. Establishing a clear end goal was achieved taking a collaborative approach with all stakeholders. The project aimed to address gaps and evident community needs, developed a vision and oversight sought by the Academy management team and holistically supported the Academy team throughout the transformation.

7.1.2 Identify a robust change management model that can be adopted for this project transformation - ORO 2

The change management model adopted for this transformation project was developed using an action research cycle approach, learning in practice and the team's past successes, challenges as well as previous Academy experiences (Schon, 1992). The change model ensured that the transformation was built on reflection-in-action to meet the agility required by such project, whilst employing established models (Kotter, 1996) to structure the management diagnosis process roping in the firm's best practices. The model adopted made use of technical rationality to address the research question, however adjusting the change in real-time in response to unexpected situations. The action research cycle model enabled me to reframe problems when faced with unexpected situations brought about by the unstable business environment affected substantively by a global pandemic. In addition, incorporating PWC's support methodologies brought in industry expertise and a systematic support to assist the team throughout the transformation process. Undertaking an action research approach within the firm's context provided a proactive and iterative approach, allowing for continuous learning and adaptability as the project progressed into the implementation phase. The action research approach also emphasised the importance of team collaboration, learning, evaluation and reflection initiatives whilst engaging various stakeholder personas.

The structured approach to the project complemented and informed the action research approach during the diagnosis and design phases, particularly in the process of engaging management, setting the vision, establishing a guiding coalition and communicating change. The action research methodology on the other hand offered a process-oriented and a collaborative approach that supported addressing the business challenges within the Academy in real-time. The combination of the structured approach to an agile methodology proved to be a powerful synergy. While the structured planning approach provided clarity and direction early on in this transformation, the action

research methodology ensured full adaptability and responsiveness to the change requirements throughout the whole project.

7.1.3 Defining a roadmap for the steps in the transformation project to manage the implementation successfully - ORO 3

The structured roadmap (presented in Table 5) provided stakeholders with a clear and well organised project outline covering the various stages of the transformation, ensuring that the key objectives set out for this project were organised in an effective manner. The roadmap was also an important reference timeline for the guiding coalition and the Academy team to relate to when allocating time and associating milestones. The roadmap definition created a sense of direction and purpose, ensuring that everyone involved could support the overall journey and the specific tasks required at each stage of the project.

A clear roadmap was also essential to pin down dependencies and interdependencies between the different activities planned for this project. The timeline also helped maintain visibility of the critical path and areas where further collaboration and coordination with management and the guiding coalition would be relevant. Such planning allowed for effective allocation of resources whilst minimising disruption during the implementation process. By tracking the completion of each step and assessing its impact the team could also identify deviations from the plan more easily whilst making necessary adjustments to keep the project on track for the entire duration of the project.

7.1.4 Evaluate the effectiveness of the transformation against established quality standards in the learning space - ORO 4

Following the adoption of the new working model, the Academy was able to review its new operational setting and compare them against the new set quality standards. The new standards and related policies (refer to Figure 43) were introduced together towards the end of the project implementation stage. 33% of the quality standards forming the new framework were additional policies that were introduced as part of this project. The remaining policies (67%) where existing policy areas that had to be revised to reflect the new arrangement establishing the digital learning model.

Starting with the administrative processes linked to the trainee admission, progression and certification, the system proved to be highly effective as through the LMS all such activities could be highly automated, measured and managed. This introduced leaner and more efficient handling of administrative responsibilities including the introduction of maximum service delivery timeframes.

The digital model was also essential in publishing the organisation and synchronisation of information made available to the public through the firm's portal. This transformation shifted the process towards full automation. This improved substantially the time taken from design to publication of approved training programmes, making information readily available to the community.

The design of training programmes was also to be revisited, given the new digital learning methods employed in the delivery of training. Existing and new training programmes were subject to national regulatory approval and consequently the preparation of every training programme had to align to the new training policy standard and undergo the relevant level of quality scrutiny for technical accuracy prior to submission for regulatory approval. All certified training programmes offered by the Academy were revisited, align to the Academy's quality framework and submitted for regulatory approval.

The Academy team training and the management of trainers and expert staff were also effectively rolled out during the project implementation creating new knowledge and introduced new digital training methods that were also outlined in the quality framework. The introduction of internal quality assurance standards was essential to govern the new learning resources and trainee support assets that directly served the new training model. The effectiveness of this transformation project left a positive impact and became part of the way the Academy operates. The positive evaluation stems from the fact that now data was more readily available through the LMS. The business model proved to be effective as it enabled management to track progress through various real-time dashboards and informing on improvements needed in terms of methods and processes. Regular monitoring and evaluation were regarded as an opportunity for continuous improvement to ensure that the transformation remained aligned with quality standards over time. Progress reporting was presented to the Academy Committee meeting every six-week interval.

7.1.5 Leading the change programme by providing a learning environment for all Academy employees - ORO 5

The decision to assertively work towards the establishment of a learning environment at the start of the project contributed greatly to the overall success of Academy's transformation. Positioning team learning at the centre of this project led to the creation of a supportive and engaging environment that contributed towards active team learning. Affirming the positive learning environment outcomes are the pre- to post team questionnaire that registered a favourable variance in the following areas pertinent to learning environments, namely, Knowledge management (Section 6.7.1.5), Personal learning (Section 6.7.1.6), Team learning (Section 6.7.1.7), as part of Section 6.7.1 Team data evaluation: Pre- to post-project implementation in detail. The average mean difference between pre- to post project assessment registered a positive variance of 0.88 over a maximum 5-point mean score (18% positive variance).

Managing change in people and the respective roles and responsibilities may be considered as most challenging when compared to technology or process updates. The positive aptitude exhibited by all team members, including those team members that had considered this journey to be a steep one, is a fundamental success element of this operational objective. Ample literature was available in the space of learning but to select a couple that supported my reflective process I would consider the following:

- The development of social processes as claimed by Puente-Palacios et al. (2021) highlighting the influence and learning within teams as a collective phenomenon and the significant variations exist across different learning teams.
- Learning in teams supports the development of collective problem-solving abilities, conflict resolution skills, collaboration skills, and project management capabilities, with teams understanding how to develop self-reflection, facilitate active learning, and achieve successful outcomes through shared experiences. (Manion K. et al. ,2020)
- Claim by Kayes and Burnett (2006) that combining systematic process review and its integration as part of the team learning process supports the development of successful teams within organisations.
- Assertion by Bridges and Mitchell (2017) that, the successful transition of individuals through the change process is crucial to support the active participation and engagement of all participants, otherwise it would be merely like rearranging desks in a room.

The leadership of the team in establishing a new learning model was significantly facilitated by the project's inclusive team approach. The Academy vision to which all subscribed set the scene for the transformation. As suggested by Lia (2011) a transformational approach is not based on a leader-subordinate relationship where the leader simply rewards subordinates on the basis of performance, but more on the leader's ability to develop a robust vision and lead by example. By encouraging Academy employees to regularly assess their performance, reflect on experiences, as well as seeking and sharing feedback, every member of the team started learning from mistakes and helping to continuously refine the work processes. The project empowered a greater sense of commitment to continuous improvement that not only drove individual growth but also contributed to the overall success of the project to the benefit of the Academy as a whole.

7.1.6 Maintain a monthly review of the training services take-up by external trainees on the digital platform - ORO 6

The uptake of training services was reviewed on a regular basis particularly during the initial months post implementation. The digital platform gave a clear view of trends and patterns of trainee participation with this operational objective being met. The information helped gauge trainee movement and the impact of the digital offering, enabling the Academy to assess the demand for specific training topics, ensuring that the allocation of resources was effective and aligning the training offerings with the needs and preferences of external trainees. Data visualisations supporting this organisational objective gave a clear view of all activity, with the overall flows presented in Section 6.2.

The regular review of the training services take-up based on real-time data facilitated monitoring and evaluation of the digital platform's performance. The evaluative process assessed trainee logs, assessment scores and results, outcomes of marked assessments, cohort performance, trainer evaluation (in case of corporate clients), trainee feedback completion rates and rating values, trainees at risk of dropping out (where models could contain multiple indicators or predictors - using selected machine learning algorithms), preferences for fully online, "hybrid" or "blended" training programmes with substantial online components. This research objective proved highly valuable from a management perspective both from a day-to-day operational standpoint as well as from the Academy Committee's strategic evaluation.

Maintaining monthly review was essential to follow up on usage of the platform by external trainees, allowing the Academy team to promptly identify any technical issues, user experience challenges and

other digital barriers that may hinder the engagement of some trainees that required specific support. Elmore et al. (1996) claim that the evolution of learning and its potential to enhance individuals' abilities as active learners has become a science. They claim that through measurement this evolving field of study offers can offer valuable insights to improve the people's capacity to comprehend complex subjects and effectively apply their learning to new situations. The monthly review made it possible to consider ongoing development and enhancements to the platform, ensuring complete user-friendliness, accessible, and capability of delivering a seamless learning experience. This evaluation was also informative in terms of emerging technologies and new trainee preferences, which represented useful information in terms of future developments and updates. This review was also necessary to ensure that the new model was being well managed in terms of responsibilities and workload. As claimed by Hlupic (2021), team members need to be able to adjust to the ongoing changes as a result of the transformation, and maintaining a healthy level of well-being for themselves, having managers that assume responsibility of their wellbeing.

7.1.7 Embedding learning within the Academy team gained through guidance, coaching, training and feedback - ORO 7

Embedding learning can be deemed as one of the most fundamental aspects of this project. Developing a culture of continuous improvement and growth within the Academy team was essential for every member's professional development and that of the team. Embedding a strong learning effort was aimed at integrating new knowledge, skills, and insights gained from various learning experiences into the daily work practice and team dynamics.

Embedded learning that included basic instructional guidance on how to guide trainees to social guidance that facilitating interactions with others, such as Academy trainers and peers, facilitated learning and increased adaptability. As every member of the team actively applied new knowledge and skills acquired through the learning initiative, their performance consistently improved leading to more efficient and effective execution of tasks. The training effort enhanced the level of digital training expertise needed across the team whilst at the same time boosted the confidence of every member.

The embedded learning process made the team more adaptable and agile in the face of change. This was particularly an important aspect in the face of abrupt changes need to counter the effects of the global pandemic. The Academy grew into a collaborative environment where every team member openly shared their acquired knowledge and expertise, with learning becoming an integral part of the team's culture. Embedding this experience into the Academy's culture, positioned it better in terms

of longer-term growth and sustainability. The continuous development of Academy skills and knowledge ensured that the team remained competitive and future ready.

7.2 Academic Research Questions (AROs) – Analysis of findings

The analysis of the outcomes in relation to the academic research objectives examining the insights gained through the research process and the extent to which the research objectives have been achieved are presented below.

7.2.1 What insights can be gathered from community experts and trainers in relation to the new training requirements as a result of the digital market changes, and can these be classified? - ARO 1

Gathering insights from community experts and trainers provided valuable guidance to improve the effectiveness and impact of learning and training on society. Themed insights are classified below:

- Personalisation and adaptive learning

The community of experts and trainers underscored the importance of personalised learning experiences. Training methods, adapted content and suitable assessment methods, enhance engagement and understanding when tailored to the needs of the trainee. This aligns with Muñoz et al. (2022), claiming that adaptive learning operates as a support platform, that facilitating effective personalised training experiences for every trainee (refer to Section 2.9). Personalised training engagement requires trainers to create customisable resources, methods and activities that cater to individual trainee's distinct learning needs.

- Collaborative learning

An important learning thematic is collaboration among learners that promoted peer-to-peer learning, effective communication skills, and the sharing of diverse perspectives within teams. The community experts and trainers highlighted the value of collaborative activities and group projects in contrast to individualised learning. This connects with literature by F. Kirschner et al. (2009) in their claim that groups have a greater capacity for processing and transferring information among members, leading to the construction of higher quality cognitive representations compared to individuals learning in isolation (refer to section 2.5).

- Active learning

Empowering trainers to be given the opportunity and assume an active role in their training needs enhances motivation and ownership. Encouraging trainers to establish clear training objectives, track

their progress, and pursue areas of interest that enables their professional growth. As identified by Elmore et. Al. (1996) the new science of learning has evolved gradually to provide knowledge that can significantly improve people's abilities to become active learners who can understand complex subject matter and are better prepared to transfer what they have learned to new problems and settings (refer to section 2.4). In addition, Fosnot and Perry (1996), claim that the aim of instruction is to develop behaviours and skills that promote cognitive development and deeper understanding, instead of viewing learning as a natural outcome of maturation it is recognised as an active process where learners construct knowledge through reorganisation (refer to section 2.4).

- Growth Mindset

An important insight is that of establishing a consistent growth mindset within any learning environment. Transforming challenges into opportunities to learn and improve drives a positive learning culture and resilience when faced with difficulties. This aligns with the work by Senge (2006), where knowledge management emerges around the main parts or disciplines that are necessary to turn organisations into their generative forward-looking states, thereby assisting teams to reinvent themselves over time based on their own inherent strengths (refer to section 2.4). Catalano, A.S., et al. (2018) claim that failure is often more common than success, yet it is less openly discussed and documented. A growth mindset needs to value all outcomes along a success spectrum but also learn how to learn from failures.

- Continuous professional development

Trainers and experts promote and encourage continuous professional development for both trainers and trainees. From a trainers' perspective the latest instructional approaches, technology, and research is the key to remaining effective and innovative. On the trainee side continuous professional development is a valuable investment, providing a competitive edge, career growth opportunities, and most importantly the ability to adapt to changing industry demands. It is essential to continually improve the skills and knowledge throughout one's career. Peter Drucker (1993) claims that transition from an industrial economy to a knowledge-based economy represents a fundamental change in the way economic value is generated. In a knowledge-based economy, the emphasis shifts to the continuous creation, dissemination, and application of knowledge and development.

- Embedding technology

Trainers and experts placed great significance on the importance of integrating technology into the learning process. The use of learning platforms, collaboration tools, and multimedia resources can make learning more engaging and accessible. Extensive literature exists in the technology space but corroborating this need to embed technology is the work by Eisenbach (1999) where he claims that

advancements in technology, changes in the job market, and evolving learner expectations are requirements that indicate the need to adapt traditional training approaches to meet the demands of the modern learning landscape. The reliance on digital tools and technologies has increased, and there is a growing need for individuals to develop advanced digital literacy and technology skills (refer to section 2.2).

In conclusion, by involving community experts and trainers in a collaborative environment to examine the new learning demands arising from changes in the digital market, valuable insights were obtained. These insights encompassed industry trends, skill gaps, best practices, and learner perspectives. By evaluating these insights, it was possible to gain a structured understanding of the evolving training landscape, enabling the Academy to develop and implement a project that effectively meet the needs of the digital market.

7.2.2 Within the context of this specific business transformation, what can be learnt about the effectiveness of team learning alongside individual learning? - ARO 2

Within the context this business transformation project, there were a number of lessons learnt about the effectiveness of team learning alongside that of individual employees. Aspects of both individual and team learning effectiveness are listed in the two sections below.

- Team Learning

The first aspect team learning contributed to was developing synergy and collaboration amongst Academy members. The collective capability of the team was the chosen approach to completing the changeover as opposed to having individuals working separately. Team learning enabled different ideas, skills, knowledge and experiences to become the key elements addressing the challenges brought about by the transformation.

A second aspect involved developing a shared understanding of the project's vision, objectives, and milestones. This alignment enabled the entire Academy team to work collectively in the same direction, avoiding alignment conflicts and maximising change efficiency. This aligns to Decuyper et al., (2010) who highlights the importance of building shared cognition to enable productive collaboration (refer to section 2.7).

A third aspect that team learning provided was an environment where social learning was encouraged. This kind of learning enabled Academy members to learn from one another's successes and failures. Differently to individual learning, peer support and collaboration contributed to the professional growth of team members, that supported a culture of continuous improvement. Manion K. et al.

(2020), claim that teams can effectively embed concepts of collective problem-solving abilities, conflict resolution skills, collaboration skills, and project management capabilities. They add that effective teams learn how to cultivate self-reflection, facilitate active learning, and achieve successful outcomes through their shared experiences (refer to section 2.7).

One final aspect linked to team learning is accountability and motivation. Learning together team members felt accountable to one another. This approach created a context of shared responsibility and motivation to succeed collectively in meeting the project targets, creating a positive and supportive work environment.

- Individual Learning

Alongside the team learning effort, individual learning was necessary to develop specialised skills and expertise that were necessary to the project's success. Specialisation and adaptability linked to specific job position such as LMS administration or digital resource creation were necessary to ensure that the team could meet specific job requirements and address definite gaps in knowledge and abilities. As claimed by Weick, Suttcliffe, and Obstefeld (2005), distinctly to team learning, individual employees must engage and coordinate with one another for team learning to occur. Individual learning within the context of a team takes place when team members work interdependently towards a common task or objective within defined parameters (refer to section 2.7).

A second aspect related to individual learning was the opportunity and flexibility offered to all team members to pursue learning opportunities based on their unique needs and interests. This autonomy allowed each team member to take ownership of their professional growth and apply their learnings in relevant areas of the project transformation. Such learning included specialist training in low code development, digital course authoring or content creation through design and animation. As declared by Attwood M. et al (2000), the key to thriving in today's complex and uncertain world that's continuously adapting itself, is the ability to learn how to learn and take control of the learning process (Refer to section 2.5). With all Academy roles a personalised learning journey that aligned with their respective role and responsibility was tailored enhances the value of learning and its application to the project.

A third aspect of individual learning is aligned with the firm's culture that sustains continuous professional development, encouraging every team member to stay updated with the networks thought leadership, latest trends, methods, and practices relevant to project. This included professional development in instructional design as well learning using enhanced and augmented reality.

In conclusion, the effectiveness of team learning and individual learning in a business transformation depends on how they complement each other. Team learning harnesses collective intelligence and promotes collaboration, ensuring shared understanding and alignment. Meanwhile, individual learning enables adaptability, specialization, and continuous professional development. Both approaches are essential in developing a dynamic and agile team capable of navigating the challenges of a business transformation successfully. The key lies in integrating these two forms of learning, creating a cohesive and collaborative learning ecosystem that maximises the team's potential and drives the transformation's success.

7.2.3 Which tasks or applications of an individual's understanding of specific concepts or skills can be used to confirm subject mastery? - ARO 3

Identifying direct measures of individual knowledge to assess understanding of specific concepts and skills is central in evaluating learning outcomes. Observing the Academy's performance on tasks that entail them to exhibit capability and demonstrate their knowledge provided insights into the team's level of understanding. Kayes and Burnett (2006) argue that combining systematic review that is integrated in the team learning process supports the development of successful teams within organisations (Refer to section 2.7).

- Case Studies

During the implementation phase, each member of the Academy team actively participated in focused training sessions utilising the development version of the new platform. The training workshops were designed to engage Academy members on an individual level, ensuring their involvement and understanding by employing case studies that replicated typical training scenarios. This draws a parallel to claim by Van Buren (1999) that a concentration on knowledge competences contribute to more efficient methods of scaling the creation, adaption, and application of knowledge itself.

- Simulations

Each session focused on different aspects of the digital platform use, encouraging a participatory approach that simulated typical trainee and trainer engagement. To promote collaborative learning, a series of tasks were assigned during these training workshops, requiring team members to apply their newly acquired knowledge, develop ideas, solve problems, analyse scenarios and demonstrating specific skills.

- Practical Demonstrations

Individual assignments were presented by each member to the team to support a sense of shared learning and enabling valuable feedback. This approach served as a direct measure of individual comprehension, highlighting the specific concepts and skills acquired by each team member within the context of both individual and collective learning. This connects well with Brinkerhoff (2006) who claims that training effectiveness should be measured by how well newly acquired knowledge is applied in ways that directly contribute to valuable outcomes for the business.

- Problem-Solving Exercises

Apart from individual evaluation through practical demonstrations of knowledge and skills each team member aimed to apply different ideas to solve problem. The simulations that team members showcased in a hands-on manner, showcased the application of specific skills and competencies acquired. This training-based transition provided evidence of each individual's understanding and ability to apply knowledge in a practical learning context.

- Peer and Self-Assessments

Observing individuals in action consolidated the understanding of the knowledge acquired by every member of the team. Assessing the specific learning objectives and the skills acquired, involved structured observations, self-assessment based on achievement, and interactions where each team member was observed engaging with the creation of training activities demonstrating specific acquired skills. These activities spanned from administrative aspects to the structuring of learning content.

- Multiple Assessment

The combination of multiple assessment methods provided a comprehensive understanding of the direct measurement of the knowledge and skills. The direct measures of individual knowledge gained through training tasks provided tangible evidence of the learning outcomes resulting from the project implementation, enabling me as action-based researcher to gauge the effectiveness of learning approach whilst ensuring that every individual needs were met.

7.2.4 To what extent do the chosen methodologies for the transformation process produce a stronger state of readiness and agility for future challenges? - ARO 4

Action research methodology was the chosen approach supporting the transformation process. Action research produced a stronger state of readiness as offered a holistic and inclusive approach to problem-solving and change management. The benefits of this methodology extend beyond achieving

immediate project objectives, but it contributes to building a sustainable learning institution that is resilient, adaptive, and capable of addressing future learning challenges. The chosen methodology was essential as it aligned the Academy's goals and strategic direction. With the increased use of technology and digital solutions in every area of the economy, the challenge for the Academy to enhance its offering by innovating and adapting for the future increased. The objective of the chosen methodology was intended to promote further research, support continuous learning, and add further providing more flexibility to both trainers and trainees. As stated by Ellsworth (2002) everything flows from a purpose that is centred around clients. The ultimate endpoint for organisation's vision, mission, and strategy is defined by a concentrated emphasis on servicing the needs of trainees. As suggested by Cartwright and Baldwin (2011), achieving predicted new behaviours is heavily reliant on a vision that is properly conveyed across the entire organisation, whilst developing a communication plan that aligns well with the vision.

The selection of action research as the primary change management methodology for this project was based on its proven effectiveness and suitability in terms of Academy objectives. This choice was driven by several key factors, including the principles and practices of action research that facilitated improved employee engagement, open communication, and stakeholder involvement. By implementing an action research approach, the project was able to establish clear communication channels, develop team collaboration, and proactively address change management tasks. These elements were crucial in building an Academy that is well-prepared to address future challenges. The iterative and participatory nature of action research supported the development of an engaging and adaptable organisational culture, enabling the Academy to navigate uncertainties and embrace continuous improvement. As referred to in section 2.2, Fink (2010) asserts that making the appropriate connections between accepted new behaviours and success evolves around continued leadership and succession that can build an ongoing and renewed process over time.

The effectiveness of action research as a problem-solving and change management methodology were key aspects that linked this to organisational objective 8.1.7 at it emphasises continuous learning and reflection throughout the whole process. Team learning activities followed an iterative process were every team member had to critically analyse one's actions and output. This iterative learning cycle allowed for adjustments and improvements to be made in real-time, resulting in a more effective process. This new mindset was not confined to the term of the project, but represented a new way of working that would support the Academy's evolution going forward. As outlined in section 2.2, Lewin (1946) claimed that to secure permanency, it is not sufficient to define the outcomes of a planned change, but the new level or the desired state need to become an integral part of the final objective.

Action research also supported the active involvement of various stakeholders in a participative and collaborative way during the research process. By engaging various stakeholders, different perspectives, rich experiences, and specialist expertise could be harnessed to spearhead this change project. In addition, this methodology was well-suited to address complex challenges that required an adaptive and flexible approach to be addressed. The methodology accommodated the evolving nature of learning and institutional challenges, providing an ongoing opportunity for adjustment and innovation. Another strength related to this approach was the collection and diagnosis of data to ensure informed decision-making. This project made use of various research methods, from surveys, interviews, and observations, data was gathered to understand the problem, evaluate relevant interventions, and evaluate the outcomes. The effectiveness of this chosen methodology depended on the implementation, the organisational context, and the ability to adapt and refine the approach as needed.

7.2.5 How effective will a new internal quality assurance policy be in terms of meeting the needs of Academy stakeholders more effectively than before the project? - ARO 5

This research question seeks to examine the effectiveness of the policy in meeting the needs of stakeholders more efficiently compared to the previous approach.

- Policy Implementation and approach

The new internal quality assurance framework was designed to align with the new Academy business model and the national quality standards for licensed educational institutions. Its design addressed the specific challenges and requirements of the new digital model, aligning or creating new policy or standards as relevant. This approach aligned the Academy practice with national and international guidelines reflecting the needs of market. The quality assurance policy brought together under one framework the newly developed processes and workflows making it easier to communicate and access. The policies were embedded within the LMS so each policy or sub-policy could accompany every operation or interaction. Consolidating work practices ensured alignment across all Academy operations addressing the need to institutionalise practices and the team's knowledge. As argued by Argyris (1982), misalignment between espoused theories and theory-in-use can hinder learning, growth, and effective problem-solving.

- An embedded quality approach

The setting of new policies and subsequent training, including double-look training did promote awareness and encouraged a stronger culture of learning, to close the gap between espoused theories and theory-in-use. This contributed to have an integrated set of policies that fitted the business in a

snug way, ensuring that the quality aspect was not seen as an isolated set of rules, but rather as an integral part of daily operations. Taking an embedded quality approach ensured that the policy became an integral part of the Academy's culture and part of day-to-day practice.

- Clearly communicated framework

The effectiveness of the IQA relied on clearly communicated processes and understanding across the Academy. The effectiveness of the IQA was enhanced by involving the team members in its development and implementation. Employees had the opportunity to provide feedback, contribute their insights, and take ownership of the policies. This enabled a sense of ownership and accountability, increasing successful implementation and adherence. The entire policy framework was designed and implemented through participatory team collaboration to ensure a clear understanding of the policy's objectives, processes, and expectations. A clear understanding of each process that is outlined in the framework effectively supports compliance to the established policy. The compliance to the new policy framework was subject to robust assessment mechanisms to evaluate and ensure effectiveness of the new working paradigm.

- Inbuilt continuous improvement by design

The policy promoted a culture of continuous improvement and learning by design. The development of the IQA was built on shared best practices, learning from previous mistakes, and participation in professional assurance activities. The development of a learning culture supported the Academy in adapting to new challenges and staying ahead in the ever-evolving learning paradigm. Policy updating and refinement involves regular monitoring, feedback loops, and analysis of data to ensure compliance.

- Effectiveness Evaluation

The policy has resulted in improved effectiveness and better engagement among stakeholders by creating a common reference point for all. This review entails both internal scanning in terms of policy but also external from a regulatory perspective. The IQA framework including any subsequent quarterly updates are to be officially submitted to the official regulatory body for review and evaluation. The Regulator undertakes a full external audit and compliance review on an annual basis providing feedback and recommendations enabling the Academy to improve the quality framework processes iteratively. Such review indicates potential areas subject to improvement and further development.

- Comparison with Previous Frameworks

The design of the IQA as part of this project provided complete alignment with regulatory requirements particularly from a digital perspective with a net improvement on previous years

addressing 2 major and 7 minor observations. The IQA itself has an inbuilt policy that defines the review cycle intended to drive continuous improvement to the quality framework itself. By continuously monitoring and refining the policy, the Academy optimises its operational effectiveness and ensures its relevance in the context of an evolving training market.

7.3 Conclusions and recommendations for future research

The initiatives forming part of this project have left their mark in a number of significant ways, including the creation of an environment conducive to the development of new knowledge through dialogue, practise, and controlled experimentation. The new Academy model now allows for ideation and unstructured debate while integrating knowledge sharing into routine coaching and performance review. The transformation initiative brought new tools and technology that instigated the Academy team to develop knowledge and evolve the training service offering to become leaner and more individualised. This project enabled the Academy to create new knowledge based on innovative training concepts, exploring and learning from previous errors, and effective interaction with day-to-day procedures and experiences.

The project involved methodical observation, data collection for the main purposes of learning and reflection, decision-making, and development of efficient strategies for the Academy. The research provided me with an opportunity to work closely with key individuals through the various stages of the project including external international community experts that helped me in taking the right actions to see this project accomplished. This project has engaged more systematic rigour in following the distinct steps of the action research model, than otherwise might have been the case. It utilised tools custom-designed to quantitatively assess change, and attitudes to change, through the life of the project.

It would be interesting for future researchers to concentrate on new kinds of digital learning methods and channels, investigating whether there is a material difference in the way trainers share their expertise across diverse groups. Different training and learning channels are in continuous evolution with various initiatives investigating artificial intelligence-based algorithms and virtual reality arrangements to enrich the learning experience of future trainees. Upcoming research could also focus on the ways in which broader pressures for research evaluation are tied to the processes by which academic knowledge is generated at training institutions and the role that knowledge management plays in such respect. As described by Senge (2006), knowledge management enables organisations to become forward-looking, tap into their inherent strengths and develop continuous learning, and adapt to changing environments. It would be also quite interesting to explore further research that could investigate the ways in which institutional policies can promote or inhibit the transfer of knowledge from the trainee to the place of work within the context of a socio-economic or knowledge-economic analysis.

As for future training-related projects, it is crucial to gain an understanding of what could be the digital limitations that prevent information sharing in the future, therefore research might explore the barriers to knowledge sharing in virtual contexts across a variety of businesses or industry areas. There are ample learning and best practice examples that may be leveraged across industries. Instead of concentrating exclusively on the advantages of information exchange, it would be beneficial to gain a deeper grasp of the sustainable models that are linked with knowledge management. In subsequent research, a comparison may be made between the behaviours of organisations that are receptive to technology and the behaviours of other organisations that are dedicated to the generation of knowledge but lack the required information technology capabilities. It would be an interesting line of inquiry for future research to evaluate such relationship.

7.4 Recommendations to learning organisations undergoing digital transformation

Through the thirty-month implementation timeframe this project met various challenges but also registered a number of important positive outcomes. Like most organisations around the globe the Academy went through an unexpected and accelerated thrust in terms of digitalisation, mainly due to the pressures imposed by the pandemic pressures. Most organisations had insufficient time to adjust and did whatever possible to keep the business running. As many organisations started returning to an increasingly normalised setting, most discovered that the digitalisation efforts now required further planning, knowledge of the new setting and additional transformation to sustain longer-term benefits. Whereas transformation projects in the learning space had clearly secured financial priorities during the pandemic term, some organisations are now being faced with uncertainties about additional investment that was still aligned largely to pre-pandemic times. The following recommendations are drawn from the project and constitute lessons learnt whilst implementing this project.

7.4.1 Identifying the right technology stack

An important consideration is the early identification of early the most appropriate technology stack that would enable further growth and scalability. This is a foundation level activity in any digital transformation process. Choosing the most suitable technology is in itself an enabler to leaner, simpler and interconnected processes that in the medium to longer term simplifies the learning effort needed by each individual to engage in a successful and sustainable change project. While the expertise of IT professionals is undeniably crucial in evaluating the technical feasibility and robustness of a technology, the decision-making about the most appropriate technology stack is best made by the project leader or business owner as opposed the technical IT teams themselves. A collaborative approach in this respect can ensure a more holistic business perspective and user experience focus.

7.4.2 Leveraging the right digital channels

A second important element is that of leveraging various digital channels available to establish direct interaction with the relevant target audience. This aspect is assuming added importance due to the current incremental pace of change that tends to bring about swift shifts in market forces. Available digital platforms make it possible to run activities at scale, that present the audience with an improved experience and added value interfaces. Notwithstanding that many similar transformation projects these days have a digital strong component, it is essential that such initiatives are owned by the respective business function and not left with the technical IT units. Taking a holistic view to project transformations is often critical.

7.4.3 Applying the most appropriate change management model

A third and significant recommendation is to ensure that an applicable change management methodology is identified before starting a project. An approach that enables collaboration and participation can sustain a healthier change process and will support an increased focus on the weaker aspects of organisational capability. As experienced in this project, a framework that allows for a clear structure supported by a degree of flexibility facilitates a highly coordinated effort that provides an important benchmark at every change milestone. Additionally, by defining clear roles and responsibilities and maintaining open communication, the team is able to identify the appropriate development benchmarks, which in turn enable a controlled change strategy and progress measurement.

7.4.4 Securing effective management involvement

Fourthly, another consideration relates to the backing and involvement of the management tier within the organisation. For the project to be effective at both the strategic and operational level, management sponsorship is crucial. Full project support enables simultaneous team and individual interventions that sustain learning.

Finally, it is recommended that an iterative approach that includes ongoing refinement as the project moves forward. Calibrating such planned improvements can allow the leadership team to pre-program freezing and unfreezing learning cycles in an attempt to sustain a continuous learning culture whilst upholding new quality standards.

CHAPTER 8 – Reflection on the approach to the project

8.1 Self-reflection as an embedded project leader and researcher

As an embedded leader and researcher, self-reflection formed an integral part of this professional journey. Reflection served as a powerful tool that allowed me to gain deeper insights both as a leader guiding the Academy team and as a researcher driving this project transformation. I considered self-reflection not merely another activity in the project but a deliberate practice that empowered me to grow professionally, adapt my style, and also to excel in my role.

In my role an embedded leader my reflection started with self-analysis about my leadership style and its influence on the team. I reflected on how my communication, decision-making, and guidance influenced the Academy team dynamics and outcomes. The reflective process enabled me also to understand better my strengths, acknowledge areas needing improvement, and adapt my leadership approach to develop a positive and supportive team culture. I kept in mind that effective leadership is an ongoing journey of professional growth, and self-reflection played a key role in refining my leadership skills and abilities.

On the other hand, in my role as a researcher, self-reflection directed me through the research process. I started by critically analysing the research question and objectives set for this project to ensure that I align the effort with expertise. I reflected at length on the research methodology, acknowledging the strengths and limitations, and ensuring that it aligns with the research objectives. As part of reflection, I considered that it would have been helpful had I included a series of open-ended questions as part of the assessment tools to retrieve additional quantitative in addition to the continuous feedback received through conversations and direct contact with primary stakeholders. Such addition would have been useful to collect any anonymous perceptions of the issues and change viewpoints going into or as part of the evaluation.

I also reflected on the challenges and opportunities with the timing of this project coinciding with the peak of a global pandemic situation. The pandemic situation brought about unforeseen challenges that impacted both me personally and the change project. From a personal point of view, I had to show resilience to cope with the unexpected challenges that the pandemic brought to the team around me. I was often required to adapt quickly, often navigating their own fears and concerns simultaneously to address problematic situations impacting the team. Along the project transformation I had to show more empathy, offering support and flexibility to team members facing

personal challenges due to pandemic pressures, particularly in cases of employee health and at instances where mental well-being became my primary concern.

Throughout the research journey, I continually questioned my assumptions, control bias, and ethical considerations, aiming to maintain highest rigor and integrity in my work.

I felt that self-reflection as both an embedded leader and researcher positively impacted my emotional intelligence. Reflection helped me understand and manage my emotions better, enabling me to address challenges with greater empathy and composure. Emotional self-awareness extended to my interactions with all Academy team members, helping me develop more open communication and increased trust levels.

Self-reflection also supported me in adopting a growth mindset. I felt more self-aware trading challenges and setbacks as opportunities for learning. I learnt to appreciate the value of constructive criticism as it helped me to improve my skills and approach. I felt that self-reflection empowered me to strike the right balance between my roles as a leader and a researcher. I recognised that while the two required a different skill set, I felt that at the same time they complement one another, enriching my professional journey.

Reflection supported my self-awareness in relation to inevitable biases as a result of my professional and life experience, cultural context, and personal beliefs. Reflexivity helped me acknowledging these biases rather than denying them. I set aside time for regular self-reflection to examine my actions, decisions, and underlying motivations. This was an opportunity for me to acknowledge biases and reflect on the balance between personal convictions and collective feedback. In addition, I often encouraged feedback, even if critical, allowing me to understand how biases and decision-making processes impact the team. Reflection helped me remain connected to the experiences and perceptions of every team member. Often more than just collecting opinions, I aimed to engage in genuine team dialogue to understand better the underlying reasons for diverse perspectives.

8.2 Reflection-in-action on the transformation journey

The process of reflection for me was a transformative journey of self-awareness and self-improvement. Reflection involved thoughtful and deliberate assessment of my experience, actions, insights, learning from mistakes and make positive changes to my professional life. Below are some reflective practices and methods that helped me through the change process.

- Journaling

I kept close a reflective journal that accompanied me throughout the process of reflection. By regularly writing down thoughts, emotions, and reflection on experiences, I could clarify my own thoughts and considerations whilst reviewing my own actions and decisions.

- Guided Questions

I made use of guided questions throughout all the stages of the project from diagnosis to evaluation. Guided questions helped me reflect on the process and decision-making by prompting individuals to think critically about specific aspects that include even their own experience. Some of the questions were intentionally thought-provoking to encourage deeper exploration, leading to a more comprehensive assessment.

- Feedback and Team Discussions

Seeking feedback from the Academy team, firm's management, and key individuals within the firm presented me with an opportunity to gain invaluable insight. I engaged regularly in constructive discussions with individuals sharing different perspectives, helping me to identifying unknown to self but known to others.

- Mindfulness

Mindfulness in self-reflection helped me focus more on awareness of thoughts and emotions. I was not practicing this approach prior to this project, however once I started gaining more confidence in listening to my inner thoughts, I felt I was more in control of my thinking without being judgmental.

- Peer Feedback and Review

Employing the firm's established peer reviews whilst receiving feedback from others provided me with valuable insights that led to further reflection. I felt that such feedback encouraged a culture of continuous improvement within the Academy team.

8.3 Reflection and observations on the stages and implementation of the project

Engaging in both reflection-in-action and reflection-on-action enabled me to carefully review the actions, decisions, and outcomes, facilitating the analysis and discovery of areas that require specific focus.

- The change management model

Upon reflecting on the approach and change model adopted for this project, I decided that the key strengths were primarily associated with a clear roadmap and an iterative implementation, which effectively guided and supported the entire project transformation process. The change management strategy employed a two-pronged approach: on one hand, it focused on shaping the vision, communication, and leadership aspects in collaboration with the management team, and on the other, it leveraged diagnosis and planning cycles to inform successful implementation. The process of enhancing the preliminary vision through community participatory and an inclusive firm-based collaboration approach contributed to enhance the expediency of the vision itself. Taking this iterative approach, the team was able to identify and understand better strategic drive, the necessary steps, key activities, and project milestones planned for this transformation. Reflecting on the change model, I was positive that both the team and management identified well with the new responsibilities of each team member.

- Change leadership

Informed leadership supported by meticulous planning and execution, contributed to positive project change model. I reflected on the applicability of a change model that had to address the challenges that the implementation of a new digital learning model within a rapidly changing landscape that was characterised by volatile market conditions heavily impacted by the global pandemic situation. Through reflection and guided discussions, I concluded that the project's strengths lay in a well-structured roadmap and strategic approach to implement the change. I felt that taking a reflective approach enabled me to value and encourage more open communication, active team involvement, and collaboration amongst all stakeholders. I consider such change leadership choice to have been a positive one.

- Establishing a detailed roadmap

I noted that defining a roadmap for project that defined the key steps in this transformation project was critical as it serves as the basis to manage the implementation successfully and build the right inertia. The journey itself was full of daily challenges as well as valuable learning experiences. I felt that the reflective process helped me maintain the delicate balance between planning and

adaptability. Throughout this experience in managing this Academy projects, I have come to appreciate the importance of thoughtful preparation, effective communication, and continuous project evaluation. Reflecting on this project, I have also learnt that having a clear understanding of the project's objectives, constraints, and potential risks is fundamental towards the successful outcome of such a transformation. The project roadmap proved to be effective, however if had to implement a similar project in the future, business conditions permitting, I would lessen the concurrent list of activities to allow for better team balance and close proximity deadlines.

- Setting up a guiding coalition

Establishing a strong and diverse guiding coalition was also a significant factor in managing the implementation successfully. Through reflection on action, I realised that having a team with complementary skills, diverse perspectives, and a shared commitment to the project's vision is instrumental. Ongoing reflection on team dynamics and ensuring open channels of communication contributed to the team's cohesion and adaptability in the face of challenging instances. The guiding coalition proved to be a winning arrangement as it helped to gel the different business pillars together. Keeping the terms of reference of the guiding coalition as lean as possible was also an effective decision as it left sufficient room for manoeuvre to apply ongoing adjustments.

- Change management cycles

The change management cycles in this action research project were conducted iteratively, enabling continuous improvement, individual and team learning, and adaptation throughout the implementation process. Rather than following a linear or predetermined path, the iterative approach allowed for adjustments, open feedback, and self-reflection. The implementation was structured into manageable phases and iterations, each with its own set of objectives, actions, training workshops, coaching, and evaluation points. This pragmatic approach facilitated a more flexible and responsive implementation process.

- An engaging vision

The project planning and implementation involved the development of a clear vision, objectives, and goals that were fully aligned with the overall strategy of the firm that included input from all levels of management. Additionally, I felt that identifying and engaging key stakeholders was crucial to secure support for all management activities. I understood that the management and the guiding coalition support facilitated resource allocation, coordination of workshops, and stakeholder engagement. The refinement of the preliminary vision that take into account the importance of more open collaboration with other vocational training institutions through partnership promotion beyond the firm’s traditional boundaries was positive. In my reflection I also considered that adapting the vision to

include more on commitment towards practices that prioritise business and environmental sustainability was also an important development as this had a bearing on training development particularly in areas that were more ESG sensitive.

- An iterative implementation method

Resource allocation and defining roles and responsibilities played a vital role in executing the planned change activities. The thought process supporting the implementation approach was adaptable, making it possible to address challenges as these arose. The iterative approach yielded positive results, with daily morning meetings providing updates across teams and specific technical meetings complementing the change process and held as needed. Progress was monitored, documented, and reviewed through product backlog reviews, and retrospective sessions were conducted at the end of each sprint cycle.

- Continuous assessment and ongoing reflection

The iterative change management process involved continuous assessment of the outcomes and impact of the implemented changes. This assessment allowed the team to identify successes and areas that could be improved in the future. The iterative approach also facilitated reflection on the change processes, allowing for the identification of lessons learned and best practices. Reflecting in action on the approach, I learnt more about the approach used initially with the management, primarily on creating the necessary urgency and establishing a clear vision. A linear top-down approach had limited consideration for the dynamic and shifting aspects of this project change.

8.4 Reflection on the project interventions

Below is a reflective review of the initiatives forming part of the implementation stage.

8.4.1 Communicate the vision to all team members, including the guiding coalition.

During the project kick-off, the vision was communicated effectively to all team members and the guiding coalition through various channels, including team meetings, presentations, and one-on-one conversations. This approach developed a shared understanding of the project's purpose and direction, creating a sense of unity and purpose among the team. Clear communication of the vision imparted a strong commitment by all team members, leading to a collective sense of ownership and motivation. The guiding coalition's involvement facilitated buy-in from key decision-makers, enabling smoother execution and timely support. As I reflect on how this process was communicated, I conclude that this process was handled very efficiently throughout the full duration of the project.

8.4.2 Empower team members with essential training, coaching, resources, and continuous support.

Empowering team members through training, coaching, and continuous support proved to be an effective strategy. Pre-implementation workshops equipped team members with the necessary skills, while personalised coaching addressed individual needs, boosting their confidence and competence. Empowering team members resulted in enhanced performance and a positive attitude towards challenges. The provision of continuous support enabled a culture of learning and growth, encouraging team members to seek solutions and share knowledge proactively. As I reflected on aspects of team empowerment, I considered that a potential improvement could be that to establish a systemic peer-to-peer learning approach to further enhance collaboration and knowledge exchange.

8.4.3 Ensure alignment of all academy employees with project objectives.

Ensuring alignment among all Academy employees with the project objectives was prioritised from the start of the project. Transparent communication and regular team meetings helped employees understand how the project connected to the Academy's strategic goals, creating a shared sense of purpose. The focus on alignment led the team to understanding their role in contributing to the project's success. This brought about a culture of collaboration and shared responsibility, encouraging cross-functional cooperation. Reflecting on the alignment process between Academy team members and project objectives I thought about the possibility to introducing an alternative feedback mechanism for employees to express their thoughts and suggestions going beyond the culture of open communication and continuous improvement, particularly once the project is complete.

8.4.4 Deploy the technology blueprint and integrate IT into the existing infrastructure.

The deployment of the technology blueprint was executed following detailed planning and coordination. The integration process involved close collaboration with IT teams and stakeholders to ensure a smooth transition. The project team worked diligently to minimize disruptions during the implementation phase. The successful deployment and integration of the technology blueprint resulted in improved efficiency and streamlined processes. The seamless integration into the existing infrastructure allowed for a faster adoption rate among users following a deployment that was well-executed. Through reflection I felt that the deployment of the blueprint was a key factor in delivering this project successfully. I considered the detailed preparation of the technology blueprint was highly significant in meeting the objectives of the project.

8.4.5 Engage technical experts, conduct rigorous testing and quality assurance.

Engaging IT experts and conducting rigorous testing and quality assurance were crucial steps in ensuring the functionality and reliability of the technology blueprint. The early involvement of the IT team contributed to the identification and resolution of potential issues early on. The thorough testing and quality assurance process resulted in a robust and stable system. Early identification and resolution of technical issues minimized disruptions and provided users with a positive experience. My reflective thoughts about the use of technical experts, testing and quality assurance processes could be further supported by incorporating trainee feedback directly in the testing phase to capture valuable insights and enhance further the user experience. Additionally, involving trainees in the quality assurance process may lead to a more user-centric approach.

8.4.6 Implement robust cybersecurity and data privacy measures.

The implementation of robust cybersecurity and data privacy measures was one of the top priority objectives in safeguarding sensitive information. A comprehensive approach was adopted, with encryption protocols and access controls implemented to protect data integrity. The strict cybersecurity measures instilled confidence among stakeholders and ensured the confidentiality of sensitive data. The proactive approach to data privacy aligned with industry best practices and regulatory requirements. My reflective process around the aspects of privacy and cybersecurity were mostly of reputational type linked with trainee confidentiality. I felt however that both at infrastructure level and system testing, this project had done enough to secure safe operations.

8.4.7 Overcome integration challenges and ensure seamless communication between components.

Overcoming integration challenges was a collaborative effort involving cross-functional teams. Close communication and regular updates between teams facilitated problem-solving and streamlined integration. The successful resolution of integration challenges resulted in a cohesive system that

seamlessly communicated between components. The collaborative approach developed a sense of support between teams, promoting further cooperation. As I reflected through the process followed, I realised the benefits of implementing such change project within the framework of a multinational organisation as the processes in place facilitated most of the related efforts.

8.4.8 Address system compatibility, data migration, and ensure compliance across multiple jurisdictions.

Addressing system compatibility and data migration complexities required detailed planning and adherence to the firm's international systems policy and regulatory frameworks across international jurisdictions. The thorough assessment of system compatibility and data migration facilitated a smooth transition to the new technology blueprint. Compliance with diverse regulations enabled the project to gain the right level of support from the Academy team. Similar to 8.4.7, my reflective thoughts around system compatibility, data migration and international policy compliance, was largely simplified by the established processes already in place that were already mature and extensively developed. This aspect decreased what would otherwise be quite a burdensome intervention to address.

8.4.9 Provide training on the use of digital tools and technologies.

The structured employee learning program focused on providing comprehensive training on the use of digital tools and technologies. The training sessions covered a wide range of tools contained with the new digital platform. The training significantly improved employees' digital proficiency in utilising various tools. As a result, employees demonstrated increased efficiency in their tasks and a higher level of comfort using technology. As I reflect on the training provided, a potential process improvement I would consider should I had to implement a similar project would be to provide more specialist training opportunities to individuals that hold already proficient digital skills. I hold that such approach could further elevate the quality of the training services and product quality.

8.4.10 Enhance cybersecurity awareness and promote secure digital practices.

Raising cybersecurity awareness was a crucial component of the employee learning program. Employees were trained on the importance of cybersecurity, potential threats, and best practices to safeguard personal sensitive information of trainees. The heightened cybersecurity awareness led to a more security-conscious Academy team. Employees became proactive in recognising and reporting potential security risks, contributing to a safer digital environment. My reflection around this intervention led me to think about how to secure further the digital environment such as introducing random planted phishing exercises to sustain awareness and keep the vigilance high amongst the team.

8.4.11 Enable employees to leverage data and analytics for improved trainee experiences.

Equipping the Academy team with data and analytics capabilities allowed them to gain insights into trainee experiences, preferences, and performance. Data-driven decision-making enhanced the quality of services provided to trainees. Using data and analytics empowered the team to make data-informed decisions, leading to the initial steps into tailored and personalised trainee experiences. As I reflected about this intervention, I considered the importance of continuously enhancing learning measurement-based decisions through every level of the Academy. This would sustain the positive satisfaction ratings among trainees going forward.

8.4.12 Empower employees with real-time data to support operations and decision-making.

Real-time data access enabled employees to access crucial information promptly, supporting their day-to-day operations and decision-making processes. The availability of real-time data streamlined workflows and improved response times. Empowering employees with real-time data led to enhanced efficiency and productivity within the Academy. Quick access to data allowed for agile responses to changing circumstances, leading to better outcomes. My reflections around the organisation of administrative activities were positive given the leaner cycle-time recorded in the space, however a process improvement I would consider including would be to hold more frequently data governance reviews and data quality checks to ensure that the Academy team would be operating accurate and data is consistently reliable.

8.4.13 Intensify coaching and mentoring to facilitate the adoption of new processes and technology.

The team coaching and mentoring sessions were intensified during the implementation stage to support team members in adopting new processes and technology. The focus was on addressing challenges and providing guidance to navigate the changes effectively. The intensified coaching and mentoring significantly contributed to a smoother transition to new processes and technology. Team members reported feeling more supported and confident in embracing the changes. As I reflected on the coaching and mentoring approach adopted, I considered that the firm's culture helped substantially in getting this intervention right. Supporting employee growth was a determining factor in terms of project success.

8.4.14 Target areas of improvement identified between legacy processes and new methods.

During coaching and mentoring sessions, specific areas of change or improvement between legacy processes and new methods were targeted. Team members were encouraged to identify and share pain points and opportunities for growth. Targeted coaching and mentoring enabled focused skill development and process refinement. As I reflected on the areas of improvement that had to be

evaluated and addressed by specific business functions, I appreciated further the importance that quality standards bring to such projects in improving overall performance.

8.4.15 Evolve coaching and mentoring in parallel with the reorganisation of academy operations.

Coaching and mentoring were adapted in parallel with the reorganisation of Academy operations. The evolving needs of team members and the changing organisational landscape were considered in shaping the coaching approach. Aligning coaching and mentoring with the Academy reorganisation facilitated smooth integration of new roles and responsibilities. The adaptive coaching approach catered to individual needs during the organisational transition. My reflective thoughts around this intervention concerned an area for future development, that to embed a targeted coaching programme into the onboarding process for new team members to ensure a smooth assimilation into the Academy.

8.4.16 Integrate digital services into the new academy training model.

The integration of digital services into the new Academy training model was a crucial step in enhancing the learning experience for trainees. This integration aimed to leverage technology to complement traditional training methods and offer a more personalised and accessible learning approach. The integration of digital services enhanced the training model's flexibility and scalability. Trainees benefited from a blended learning environment that combined the best of both digital resources and in-person interactions. An area subject to reflection and process improvement would be to develop a holistic and scientific measurement of trainee engagement and progress through data generated by digital platforms that in turn provide insights into the effectiveness of the new training programmes.

8.4.17 Develop a new internal quality assurance framework.

Developing a new internal quality assurance framework was instrumental in ensuring consistent standards and best practices across all training programmes. The framework aimed to standardise and enhance the quality of training delivery and content. The new internal quality assurance framework provided clear guidelines for trainers and trainees to follow, resulting in improved training consistency and effectiveness. The reflection process around the importance of establishing a quality standard establishing a clear target benchmark as an outcome of this project facilitated the identification of areas needing further improvement enhancing further the quality aspect. As an area subject to further improvement would be deeper involvement of trainers and trainees in the development of the framework to promote a greater sense of ownership and encourage compliance.

8.4.18 Obtain renewed operating licensing from the local regulator based on the new framework.

Obtaining renewed operating licensing from the local regulator was fundamental to secure the Academy's business continuity. The new quality framework aligned with the regulator's guidelines and standards for training providers. The successful renewal of the operating license demonstrated the Academy's commitment to maintaining high-quality training standards. The new Academy's quality framework and alignment with regulatory standards in themselves enhanced the Academy's reputation and standing in the market. Reflecting on the potential and importance of regulatory licensing at a local and EU setting enabled to consider further the opportunities linked to European recognition and collaboration through the firm's network. This was surely an effort and a project output worth pursuing as part of this project.

8.5 Reflection on the impact of the global pandemic

The SARS-CoV-2 pandemic brought about significant challenges to this action research project, but it also hastened innovation and adaptability within the Academy team. From a project planning perspective, the methodology had to adapt and embrace new ways to collaborate, collect diagnosis data, and engage with key stakeholders in the face of the arising challenges. I felt that building trust within the context of action research, might be more challenging in the context of forced virtual environments compared to face-to-face interactions. I was also partially concerned that data collection may be limited given the restricted movement and gatherings, where collecting observational data had become close to impossible. This concern was overcome relatively quickly with most stakeholders adjusting rapidly to the new work context.

On a different note, the Academy team and some key stakeholders were impacted by the stress and anxieties induced by the pandemic possibly affect their views, engagement levels, and overall well-being. The risk impact linked to this state of flux was the possibility of having shifting priorities of all those participating in the research, making identified problems more pandemic dominated and less relevant to the core learning business. The adaptability of action research based on reflection was fundamental with learnings from this period potentially shape the future of action research in unanticipated ways.

8.6 Reflection on unanticipated insights

The review to follow aided in developing a more complete comprehension of the research context and generating further insights. The reflective process yielded four notable outcomes beyond those expected, which are outlined below:

8.6.1 Increased trainee engagement

One of the areas requiring constant reflection was how well the newly implemented business model was contributing towards improved trainee engagement. Whereas I strove to provide that engagement I started off believing it might be a struggle. However, as I reviewed regularly how the integrated interactive activities, collaborative group work, and added multimedia resources were impacting trainee engagement, I could see a significant impact. I noted that the incorporation of interactive elements such as collaborative tools and engaging digital interactivity increased the potential of trainees to become more active participants. Across the various training domains offered by the Academy, collaborative group work resulted in increased communication and teamwork skills that contributed to enhanced engagement. I noted also that engagement of trainees increased with the use of specific purpose multimedia resources that catered for the diverse learning styles, holistically capturing the trainees' attention and making training more collaborative. I could also observe that the new training model enabled a more malleable Academy strategy that could evolve and develop a higher levels of trainee participation, enhancing motivation, critical thinking, and improve overall learning outcomes.

8.6.2 The management of organisational change

Reflection throughout the implementation of the Academy's organisational change was an intricate process, championed by identifying key barriers and implementing targeted interventions. Along the change implementation, it became more apparent that most employees experienced a fear of change, a clear need for training, and a desire for continuous communication. The level of these insights was new to me and guided me in my effort to support specific interventions aimed at addressing these barriers and facilitating a smoother transition. By directly targeting these identified areas, I supported the Academy to overcome elements of resistance to change and create a more conducive environment for successful change.

8.6.3 Impact on professional development of trainers

Another aspect of business that was subject to reflection was the strength of the professional development of trainers. This has been significant effort with a focus on improving their performance and enhancing their skills in utilising new digital methods, alternative instructional design and formative assessment methods. Through the collection and analysis of training performance data on the LMS, areas for improvement could more readily be identified. Data helped me to gain a clearer picture of the situation supporting a more thorough reflection process. Addressing these gaps, individual trainers received targeted preparation to effectively help each training leverage the new digital tools that would incorporate advanced instructional methods in their training sessions. In addition, every trainer was supported in implementing formative assessment practices to monitor and enhance participant learning. The reflection process was essential to sustain a responsive professional development approach with trainers helping them deliver high-quality training experiences, leveraging digital resources, innovative instructional techniques, and ongoing assessment to optimise participant engagement.

8.6.4 Trainee experience and satisfaction

Reflection played a crucial role in the final aspect of trainee satisfaction ratings. The ratings were based on trainee feedback and evaluations of the training. Through the process of reflection, trends were analysed, leading to specific modifications in the delivery of the training. These changes contributed to a greater than expected upward trend in trainee satisfaction. The ongoing review and reflection also facilitated the introduction of increased training support and improved communication between trainers and trainees. This reflective practice not only enhanced the feedback and evaluation process but also resulted in a higher level of trainee satisfaction. The analysis of trainee feedback indicates a consistent 12% higher rating across all training areas. Even though an improved trainee feedback rating was coveted, given the completely new training environment and the fact that previous trainee ratings were already well above average, a more conservative rating was targeted, placing this outcome beyond the anticipated result. The improved support provided by trainers and the establishment of better communication channels created a more positive learning environment, ultimately leading to heightened trainee engagement and overall satisfaction.

CHAPTER 9 – Summary of the research project

9.1 Final summary and concluding remarks

As a practitioner researcher, leading the team through the transformation process and successfully completing this project has been an incredibly rewarding journey. This project has offered me a unique opportunity to embrace a new experience and has left me with a profound sense of achievement for having been able to contribute to the evolution of learning at the Academy. The impact of this project has reached far beyond my personal growth, as it has had a positive influence on all that Academy trainees who now receive higher-quality training in a more supportive learning environment.

In addressing the research question posed for this research project (section 1.7.1) on '*how can the Academy's training model be redesigned to increase the learning effectiveness and opportunity as well as meet the demands of present and future trainees?'* it may be concluded that the following elements should constitute an integral part of such a transformation:

- Undertake a comprehensive needs assessment to understand the evolving learning requirements and preferences of future trainees.
- Engage stakeholders, including a cross section of potential trainees and organisations, to gather insights into prospective expectations and learning styles.
- Support emerging technologies and trends in digital learning space to create a technologically advanced and engaging training model.
- Design a training model that allows for personalised learning paths based on individual strengths, weaknesses, and interests.
- Incorporate a flexible approach and modular content to accommodate the diverse lifestyles and commitments of future trainees.
- Implement a robust feedback system to gather ongoing input from trainees, trainers, and stakeholders.
- Identify and integrate key skills and competencies that align with future workforce requirements.
- Design and deploy systematic quantitative and qualitative data collection tools that assess various stages of the project and provide feedback on its success
- Benchmark the new model against the highest international standards

At a time of considerable market disruption, this project opened up a window on data-driven decision-making in relation to the Academy performance and quality measurement. As the need for data becomes increasingly pivotal in enabling actionable insights the project delivered a technology-based platform that could make this happen. This transformation project enabled management to make positive strategic choices, improve the operations at the Academy and promote a stronger continuous improvement culture, not just internally across its structure but also within the community it supports. At PwC, the purpose of all service lines is t to build trust in society and help solve important problems, especially the challenges that arise as our world undergoes rapid and dramatic change.

The knowledge shared through this project traversed key aspects pertaining to digital transformation namely that bespoke management approach and sequential change processes that were adapted to serve as innovative tools. The action research methodology led to an approach that enabled extensive evaluation based on bespoke tools as opposed to taking an off-the-shelf approach. This bespoke approach spanned from the testing of large group sentiment assessment as part of community collaboration, the design of the management tool based in Kotter's eight step model, the tailor-made team learning assessment and well as the quality benchmarking tools. On the other hand, by embedding flexibility, collaboration and continuous feedback loops into these processes, the Academy nurtured an environment that was conducive to innovation. The project embraced iterative approaches, encouraged experimentation, and empowered employees to think creatively while still adhering to the structured framework of sequential transformation. Additionally, integrating digital technologies to the learning model enhanced the adaptability and responsiveness of the new processes, allowing for prompt adjustments and improvements. The systematic rigor of sequential transformation coupled with the dynamism of innovation this Academy project demonstrated that it was possible to navigate change while driving sustainable growth.

The Academy team demonstrated a great degree of dedication over the entirety of the project, with all its high aspirations for offering a brand-new trainee experience that satisfies the highest quality criteria. The project-based action research methodology proved to be an efficient model that guided the Academy's transformation. The Executive Committee and the Academy management tiers valued the iterative change approach and supported the change process throughout. As a backdrop to this project was an unstable market situation battered by the global pandemic. Understanding this new training scenario from a market, trainer and trainer perspective did not carry any clear answers. In this regard, the community event that took place within the design stage prior to implementation provided valuable insight at a time when the training domain was in a state of flux due to the threat posed by the general socio-economic anxiety. It was clear that this epidemic put the continuity and

sustainability of all educational institutions to the test. The review of feedback and the ensuing conversation set the appropriate tone and sparked a sense of urgency that initiated the change process. As Buchanan and Huczynski (2019) have suggested, individuals with a high need for achievement tend to thrive in situations where they are challenged to meet high standards of excellence within a limited time frame.

The vision was to construct a revamped business training model based on effective, consistent, and quality training and learning services. This vision was put into action by the guiding coalition who brought a greater sense of purpose, meaning, and significance to the Academy's work, which encouraged and empowered the team to contribute to the vision's realisation. The initiative used a positive communications style that appealed to the team, addressed them individually, and shared goals that each member could achieve. This resulted in a positive list of process transformation activities centred on the introduction of new technology, which served as the backbone for the change process. The design and implementation of new processes resulted in a team learning and development journey that took all Academy employees through a knowledge acquisition process. The project tasks were implemented using a successful iterative process that allowed for incremental learning, exposure, and improvement. In this regard, the team transformation evaluation reported a measured positive variance in terms of outcomes gauged at the beginning and end of the project. The change brought about by this project enabled the Academy to engage more with the capability of the Academy team to produce, acquire and apply knowledge to create new training programmes and services. The new working methods covering both content, delivery and administrative methods were consolidated in an internal quality framework that became the reference model for quality.

In many ways, corporate clients today have come to the realisation that in order to survive the cutthroat competition resulting from continuous disruption and pressures in the international market environment, it is vital to transform the organisation into one that harnesses knowledge. The Academy's training and learning role, complementing the firm's specialised functions, plays its part in assisting organisations to have r how to achieve the changes required to become a knowledge-based enterprise.

On a personal note, it has been an honour to work with PwC and discover more the firm’s potential including the role that its people play in delivering what I consider to be a genuine desire to constantly do their utmost. PwC and the community that it supports have the potential to continue to grow in the future, and I look forward to learning more about this hereafter. I hope that my work will contribute further to the advancement of organisational knowledge and to the continuance of the

process of candid organisational reform, which are two areas within which I have grown a great interest over the past years of pursuing this research.

In conclusion, this action research project has presented me with a unique embedded learning opportunity that resulted in improved team service delivery and my own personal professional growth. Over the past three years, this project and the research that has accompanies it has proved to be an important component in organisational development of the Academy team and contributed directly to improved quality of services offered by PWC.

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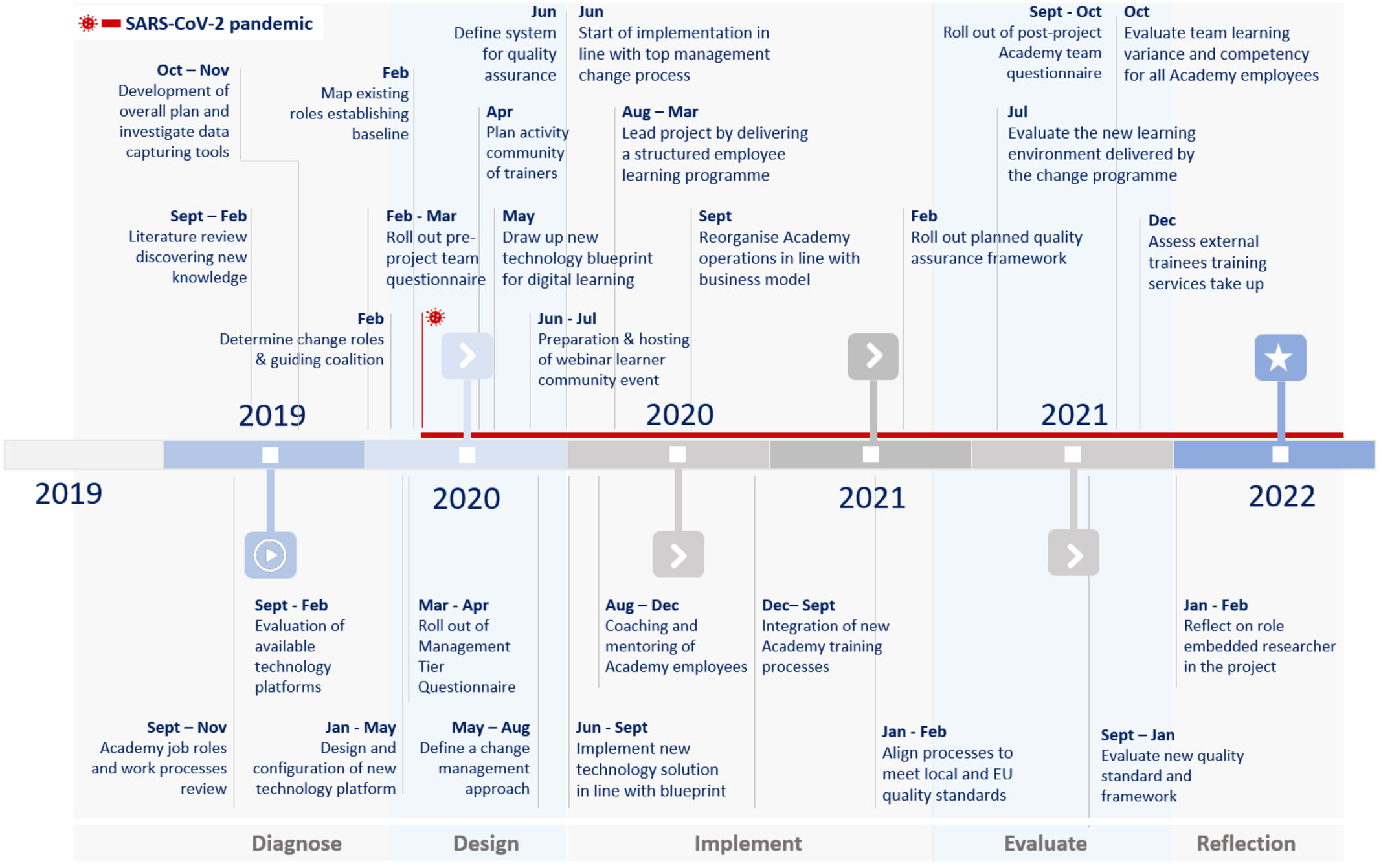
APPENDICES

Appendix A – Project Timeline



Appendix B - Academy job roles

The various positions shaping up the Academy team include seven roles outlined in the sections to follow. Analysing the current job roles as part of this project was necessary as it allowed proactive skills identification, knowledge gaps, and competencies that would be required in the evolving landscape of training. Anticipating future needs and aligning the workforce, ensured that the team was prepared for upcoming challenges and opportunities.

B.1 - The Senior Manager role

In addition to the action researcher role, the formal position I hold within the Academy is that of senior manager. In this role, my responsibilities encompass the development and implementation of training plans for the Academy, aligning them with the firm's overall goals and objectives. I oversee the creation and design of training programmes and courses, collaborating with subject matter experts and instructional designers to ensure their effectiveness, engagement, and alignment with learning objectives. Budget management falls within my responsibility, ensuring appropriate funding for training initiatives and the availability of necessary tools and materials. Furthermore, as a senior manager, I lead and manage the training academy team, which includes training coordinators, instructional designers, administrators, and support staff. I provide guidance, mentorship, and support to develop team productivity, growth, and professional development.

The role of the senior manager involves active engagement with important stakeholders, including the Academy Committee, executive team, vendors, trainers, and clients. This engagement ensures that the training needs and requirements are in line with industry trends, advancements in training methodologies, and emerging technologies. The senior manager holds the responsibility of monitoring and assessing the effectiveness of training programs. Additionally, this role is accountable for ensuring the training academy operates in accordance with applicable regulations, industry standards, and the policies of the firm.

The Academy holds two Senior Manager positions, me and a second senior. Differently to my appointment, the second Senior Manager position does not a full-time position. Whereas my position focuses on strategy, operations and digital training delivery, the second senior manager focuses on corporate client engagement and tender-based bidding work.

B.2 - The Training Coordination Manager role

The Training Coordination Manager role is responsible for coordinating or facilitating training sessions. They ensure that the client's or the individual requirements of trainees are effectively met. They ensure that the established delivery methods are adequately supported, engage with participant trainees, and provide guidance or support throughout the Academy's training sessions. This role is responsible for handling administrative tasks related to training, such as maintaining trainee records, tracking attendance, and managing training databases. The Training Coordination Manager is responsible to ensure accurate documentation of training activities are maintained and prepares reports on training metrics and outcomes. This role collaborates with external training providers, consultants, or vendors in relation to industry standards and certification training. The Training Coordination Manager manages vendor relationships, follows up on licenses and paid assessments, and ensures the quality and effectiveness of training services across all service lines.

B.3 - Sales Coordination Manager role

The Sales Coordination Manager is a critical function within the Academy supporting the sales function, facilitating effective communication and collaboration with clients, and ensuring that sales activities are coordinated and aligned with organisational objectives and the firm's marketing efforts.

The role provides support to the whole Academy team by managing sales processes, assisting with sales forecasting, and coordinating the preparation of sales presentations and proposals. The role is also responsible for handling administrative tasks, such as maintaining sales databases, tracking training sales activities, onboarding new clients through the firm's KYC process and generating trainee reports. This role is responsible to analyse sales data, track key performance indicators (KPIs), and generate reports to provide insights on sales trends, performance, and market responsiveness. This information helps in identifying opportunities to enhance sales strategies and meet the sales targets.

B.4 - Content Design Specialist role

The Content Design Specialist role is responsible for developing high-quality and engaging training content across various formats including information packs, videography, photography, infographics, and presentations. They have expertise in designing content that effectively communicates key messages and meets the needs of trainers and trainees. This responsible to write, edit, and proofread content to ensure accuracy, clarity, and adherence to the firm's brand guidelines. The Content Design Specialist often collaborates with subject matter experts to gather accurate and relevant content. The

Content Design Specialist manages content repositories and organises content assets for easy access and retrieval. This role is responsible to draw up content plans and content production schedules to ensure a consistent and timely availability of content.

B.5 - Technical Support Officer role

The technical support officer is the role responsible for providing assistance and resolving technical issues to trainers and trainees. The role primarily revolves around technical preparation of training areas, troubleshooting issues, supporting events, and resolving various technical problems related to equipment, applications and network systems. The technical role carries also responsibilities related to addressing customer queries and concerns related to technical issues via various communication channels such as calls, email, or live chat. The role is also responsible to provide prompt and effective solutions, ensuring a holistic trainee experience.

The Technical Support role is also responsible to analyse and identify the root cause of technical issues reported by trainees. Knowledge and expertise to troubleshoot problems are needed to support trainees both remotely and on-premises. In addition, this role provides step-by-step advice or best practices on how to overcome challenges and enhance technical proficiency of trainers and trainees.

B.6 - Logistics Officer role

The role of the Logistics Officer includes coordinating various logistical elements of training programs. This entails scheduling training sessions, securing venues and resources, and managing training materials and equipment. The primary objective of this role is to ensure effective organisation and scheduling of trainers, trainees, and resources. Additionally, the Logistics Officer is responsible for upholding legal requirements and ensuring trainee safety. They also maintain appropriate documentation to comply with regulations related to health and safety, fire drills, and the provision of food during full-day training sessions.

B.7 - Receptionist role

The Academy receptionist is responsible to warmly welcome visitors, trainees, and staff, providing them with necessary information and guidance. The receptionist role ensures that visitors feel welcome and comfortable, creating a pleasant and warm environment. The role typically involves being the first point of contact for visitors, guests, and employees of the firm. As the front-facing

representative, the Academy receptionist plays a pivotal role that encompass a range of administrative, customer service, and organisational tasks.

The Academy receptionists handles incoming calls, emails, and standard forms of communication, addressing inquiries, forwarding messages, or directing them to the appropriate employee within the Academy. The role is responsible for the upkeep of the reception area, keeping it organised and visually appealing as this area aids the first impression of the Academy. The receptionist monitors access to the premises, ensuring that only identified individuals enter the training areas. This role is also responsible to provide all visitors with badges, maintain visitor logs, and follow security protocols to safeguard the Academy's training premises and its occupants.

Appendix C – Team Questionnaire

Organisational culture

A1. The Academy lives by its value of supporting continuous professional learning.

A2. The managers at the Academy communicate clearly and consistently to all the team, indicating why continuous professional learning is essential.

A3. The Academy regularly communicates publicly its commitment to support continuous professional learning.

A4. The Academy follows an established change programme aimed at achieving a desired digitally-enabled future state.

A5. The Academy managers act as role models in their own commitment to learning and providing opportunities to others.

Management & Leadership

B1. The Academy supports learning and when a mistake takes place, instead of blaming someone for it a stronger focus on learning is made.

B2. The Academy provides the opportunity to all members of the team to develop their leadership skills regardless of their grade or position.

B3. The Academy encourages doing things in an innovative way and if the outcomes are not positive the focus is placed on learning aspects.

B4. Academy managers set the right example by collaborating and sharing across service lines and organisational boundaries.

B5. The Academy management shares its strategic objectives and then allows you freedom to find the best way of achieving results.

You & the Academy Team

C1. As a team member within the Academy, you are expected to understand learning processes and apply them in your everyday work.

C2. Every individual within the team is encouraged to benchmark oneself against Academy best practice standards.

C3. The Academy adequately supports learning and people development (internally) on an ongoing basis.

C4. Time is regularly provided to allow you to share your personal learning and experience with the team.

C5. When the Academy completes a new task or project, it evaluates the outcomes and documents the new process including what has been learnt.

Leveraging Digital Technologies

D1. The Academy operates effective unified digital communication across the whole team.

D2. The Academy organises its key knowledge and experience effectively, making information available to everyone in the team.

D3. There are clear rules that are followed by everyone when accessing and contributing to the team's knowledge.

D4. The Academy is doing enough in terms of digital training and technology-based solutions.

D5. The Academy leverages well and fully utilises the market data and feedback acquired through trainees.

Knowledge Management

E1. Knowledge generated by the Firm is validated for learning and made available to the team.

E2. The Academy recognises and rewards the value of knowledge created and shared by individuals and teams.

E3. The Academy systematically assesses its future knowledge requirements and executes plans to meet them.

E4. Academy managers set an example by collaborating and sharing information across all lines of service within the firm.

E5. The Academy's investment in IT systems, encourages knowledge management and sets interpersonal communication as a priority.

Personal Learning

F1. When a team member leaves the job at the Academy it is ensured that all the knowledge generated by that same individual is captured with least disruption to its corporate memory.

F2. Every team member is always encouraged to hear out clients and find better ways to do what each individual does on a regular basis.

F3. The Academy makes it a point that every member of the team is directed to using various learning options offered by the firm.

F4. The Academy strongly believes in and encourages self-paced learning of each team member.

F5. The coaching system adopted by the Firm is an effective way to encourage personal learning for all Academy team members.

Team Learning

G1. The Academy encourages teamwork and rewards good team achievement.

G2. The Academy makes time to review learning experiences from projects involving more than one team member.

G3. The Academy encourages and supports informal internal and external networking (external to PwC).

G4. The Academy uses every opportunity to engage in collective problem-solving processes and for members to learn from each other.

G5. The Academy recognises communities of people that embrace common professional interests, with whom experience and best practice is shared.

Valuing Learning

H1. The Academy has a variety of mechanisms for sharing best practice in every area of business.

H2. The Academy quantifies the cost that arises from unnecessary duplication of efforts.

H3. The Academy takes into account the added value of individual members and teams and takes the right measures to use them.

H4. The Academy establishes its formal learning activities from defined business improvement objectives.

H5. The overall investment in individual members and team learning is used as a key performance measure for the Academy.

Appendix D – Research Ethics Application Approval

Middlesex University London

Business School REC

The Burroughs
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Main Switchboard: 0208 411 5000

17/09/2019

APPLICATION NUMBER: 8278

Dear Robert Debono and all collaborators/co-investigators

Re your application title: Change project in delivery of training to enterprise

Supervisor: Prof Andrew Mayo

Co-investigators/collaborators:

Thank you for submitting your application. I can confirm that your application has been given APPROVAL from the date of this letter by the Business School REC.

The following documents have been reviewed and approved as part of this research ethics application:

Document Type	File Name	Date	Version
Data Protection Act checklist	Data Protection Declaration Form	01/07/2019	Declaration V1

Although your application has been approved, the reviewers of your application may have made some useful comments on your application. Please look at your online application again to check whether the reviewers have added any comments for you to look at.

Also, please note the following:

1. Please ensure that you contact your supervisor/research ethics committee (REC) if any changes are made to the research project which could affect your ethics approval. There is an Amendment sub-form on MORE that can be completed and submitted to your REC for further review.

2. You must notify your supervisor/REC if there is a breach in data protection management or any issues that arise that may lead to a health and safety concern or conflict of interests.

3. If you require more time to complete your research, i.e., beyond the date specified in your application, please complete the Extension sub-form on MORE and submit it your REC for review.

4. Please quote the application number in any correspondence.

5. It is important that you retain this document as evidence of research ethics approval, as it may be required for submission to external bodies (e.g., NHS, grant awarding bodies) or as part of your research report, dissemination (e.g., journal articles) and data management plan.

6. Also, please forward any other information that would be helpful in enhancing our application form and procedures - please contact MOREsupport@mdx.ac.uk to provide feedback.

Good luck with your research.

Yours sincerely

David Kendhan