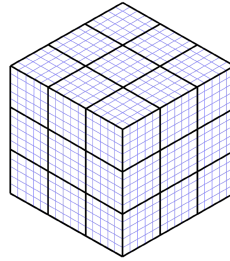# The Atkinson Conceptual Framework For Instructional Systems

A New Teaching and Learning Paradigm

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W/ ADDITIONAL CREDITS

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PREFACE

Question *i*: What does this White Paper Cover?

Answer *i*: This White Paper describes a technological (conceptual) framework and learning repository that provides 1) structure for organizing teaching and learning material across all types of content and life domains, and 2) autonomy for allowing individuals to create their own roadmap of teaching, learning and personal transformation. When applied, this repository allows individuals to learn more effectively, efficiently, and permanently, including changing habits for healthier outcomes and healthier lives.

Developed by Charlie Atkinson, EdD, The Atkinson Conceptual Framework for Instructional Systems (The Atkinson Conceptual Framework) is a visual representation that is mental, physical, and digital. This proprietary tool provides a roadmap for applying superior creative problem-solving and critical thinking skills to an array of lifestyle topics.

Question *ii*: Who should be reading it?

Answer *ii*: This White Paper is appropriate for learning system content developers, technology companies with platforms and databases, and companies with access to users who require more efficient and improved learning to achieve healthy lifestyles.

Question *iii*: How did Charlie Atkinson get here and what is the history of the scientific and technological journey that has paved the way for the Atkinson Conceptual Framework as a foundation model for instructional design?

Answer *iii*: Charlie has spent his entire professional career focused on instructional system design, architecture, and the use of technology to effect long-term behavioral change. Elaboration *iii*: Charlie Graduated from Harvard in 1958, having rowed crew and having served as publisher and business manager of the Harvard Advocate. After graduation, he served for two years at the US. Army Artillery School and Missile School as project manager for teaching machines, where he invented the award-winning M One teaching machine.

In 1963, he helped found a learning company, Basic Systems, and sold it to Xerox. Even then, Charlie was looking to technology and technology companies to apply to learning systems. He also served as research assistant to B.F. Skinner on the Teaching Machine project for psychology.

Charlie completed his Doctorate of Education at the Harvard Graduate School of Education in 1972. His doctoral thesis explored student question asking in a natural classroom setting.

Charlie then founded several start-up companies that secured contracts with pharmaceutical and healthcare companies, focusing on various diseases and treatments. He observed that even though the drugs differed, much of the content was similar. He thought it would be beneficial to repurpose the existing materials instead of creating new ones for every project.

He became aware of database publishing through Ted Lee (previously hired by Charlie to be President of Basic Systems), who had become president of a database publishing company in Colorado: Information Handling Services. Ted took IHS and its microfiche database and turned it into a monthly subscription service growing it from $5 to $80 million by standardizing the presentation of the information and keeping it up to date. As Ted and Charlie discussed Charlie's vision, Ted wanted to come work together again: to make a database publisher of Competence Assurance Systems (CAS).

As Charlie was developing that company, Andy Farrar and Charlie called on Johnson & Johnson, Lederle and Berlex (Division of Schering Plough), each with a new oral contraceptive. In a single day, they closed three contracts totalling $500k in new business, proof of concept that by reusing the same core materials and isolating proprietary information, they could reduce costs, reduce development time, and yield better quality.

Schering Plough (Berlex's parent company) based in Germany came to hear about CAS's database learning systems approach and Dr. Lutz Martini, head of Information Technology and Dr. Wolfgang Thiede, head of International Marketing, came to the US to meet with CAS. The outcome of that initial meeting was a five-year research effort to build the database learning system for Schering. They intended to use its system to track knowledge and skills related to each product and job performance. During one of the project meetings, Charlie confessed he wasn't on top of the technology. Lutz Martini responded, "We don't need a technologist, we need a thinker."

As a result of this work, Charlie published a seminal work in 1997: "The Learning Systems Repository: A Conceptual Framework," a technological approach for augmenting the learning process which was later to be cited as the best anticipation of how learning and technology would unfold in the 21st century (Atkinson, 1997).

In 2012, Charles contracted Neuroinvasive West Nile Virus and was treated at Mass General Hospital and Spaulding Rehabilitation, where he spent over 400 days on a ventilator. He became an active participant in his own recovery, applying his vast array of knowledge, skills and creative problem-solving to be a proactive patient who effected his own miraculous recovery. As a result of this experience, Charles conceived a breakthrough in applied behavioural transformation, the Atkinson Whole Brain Conceptual Framework. This framework built upon and expanded his earlier models and is the foundation for this White Paper.

The Atkinson Conceptual Framework for Instructional Systems not only provides a structured way to augment human intellect, but it also integrates artificial intelligence in this endeavour. AI is advancing rapidly and is sometimes viewed as a competitor to human intelligence. We believe that for AI to achieve its maximum potential, it should be integrated with human learning and natural human intelligence (NHI). Among the forefront of AI advancements are Large Language Models and generative AI products. Our vision promotes products that merge AI and NHI seamlessly, rather than keeping them distinct.

SECTION 1: INTRODUCTION

Question 1.0: For individuals that are overwhelmed with an overabundance of information; what are the next steps in terms of improving Learning and Teaching Solutions and taking advantage of potential AI applications?

Answer 1.0: The next step is to create tools that enhance learning outcomes by organizing and structuring Learning and Teaching Solutions. This will also pave the way for the seamless integration of AI with natural human intelligence (NHI).

Elaboration 1.0: The purpose of this document is to illustrate how the Atkinson Conceptual Framework for Instructional Design will be a foundation model; a new tool to augment human intellect. This framework is designed to enhance human intellect on mental, physical, and virtual levels by providing a foundation model that utilizes the combined powers of Natural Human Intelligence (NHI) and AI. It aligns and integrates the ways our mind's function, learn, and problem-solve, thereby also maximizing the application of AI in daily teaching and learning.

SECTION 2: BACKGROUND

Question 2.0: How should we structure and organize Learning and Teaching while also integrating AI with natural human intelligence (NHI)?

Answer 2.0: By utilizing a universal learning repository framework, we can merge instructional system development and problem-solving methods into a technology tool that will also integrate and increase the potentials of Large Language Models. This repository is based on a high and low-level structure that aid humans in their learning processes, ensuring they acquire the necessary knowledge efficiently. This technology will also aid LLMs in their learning and information retrieval processes by providing a structure for organizing prompts and probes.

Elaboration 2.0: The Atkinson Conceptual Framework is a technological (conceptual) framework and learning repository that provides an organizing principle for the process of developing and delivering teaching and learning that more effectively changes habits for healthier outcomes and healthier lives. This yields a powerful curriculum structure that the world can use to autonomously create and organize curricula for themselves and for others with common structures and processes and greatly improved outcomes.

This solution will provide a paradigm shift in the potential of teaching and learning within an integrated system. This technology uses a cubic architecture. Its visual and memorable features act like a roadmap, allowing for the flexible and customizable storage and organization of information.

Current learning systems either provide conceptual or action-oriented knowledge; they are further segregated by 'lifestyle and well-being' and 'organizational skills'. Our technology combines conceptual knowledge with action-oriented knowledge and practice, and integrates various life-domains in a coherent, consistent, and strengthened, organizable, and transformative learning process.

Question 2.1: What are the key ideas, thinkers and documents related to the development of the Atkinson Conceptual Framework?

Answer 2.1: From the invention of spoken and written language, better and better tools have been developed to augment human intellect.

Elaboration 2.1: In the mid-20th century, Vannevar Bush, head of the U.S. Office of Scientific Research and Development (OSRD) under President Franklin Roosevelt, played a significant role in the wartime science and technology efforts including the Manhattan Project. In July 1945, he penned a visionary essay titled "As We May Think" (Vannevar Bush, 1945), which proposed ideas related to information storage and retrieval. This article, decades later in 1962, inspired Douglas Engelbart, who was working at the Stanford Research Institute (SRI), to develop a conceptual framework for augmenting the human intellect. The pioneering

endeavors of these two scientific giants have ignited a six-decade-long journey, seeking to realize their shared vision of enhanced human capabilities.

As Charlie was developing his theories on database learning systems and in conjunction with his work with Schering Plough, he discovered two compelling books.

The first was High Tech Ventures (1991) by C. Gordon Bell. Bell's work relied on the "Whole Brain" model; a methodology Bell developed in collaboration with Chuck McVinney. McVinney also worked at Digital Equipment Corporation while Bell was there, and who would later become Charlie's Vice President of Marketing at The Whole Brain Company. Bell organized the categories that went into a high-tech venture following a Whole Brain model.

The second was Object Oriented Technology: A Manager's Guide (1990) by David Taylor. It related to the application of object-oriented technology to learning systems.

In 1997, Charles Atkinson authored a seminal work entitled "The Learning Systems Repository: A Conceptual Framework" (Atkinson, 1997). It was David Taylor who recommended Atkinson for inclusion in the book, Instructional Developmental Paradigms, edited by Charles R. Dills and Alexander J. Romiszowski.

In the preface, the editors concluded that Charlie's paper encapsulates the future direction of instructional systems development in the 21st century. His remarkable contributions led to his recognition by the editors as the best submission among the 50 contributors and as the best anticipation of how learning and technology would unfold in the 21st century.

Question 2.2: Why will the Atkinson Conceptual Framework significantly transform the field?

Answer 2.2: The Atkinson Conceptual Framework is transformational because it provides a single multi-purpose flexible structure to facilitate and augment human learning and intellectual capacity,

Elaboration 2.2: A structure organizes information processing in the brain. A structure augments working memory capacity, which is directly linked to intellectual performance, cognitive complexity, cognitive flexibility, and learning plasticity.

Making plans is the cognitive capacity of creating a structure for future steps, too. The human ability to make plans is part of higher-order cognition, which consolidates the human ability to make possible and manage their existence throughout longer lifespans. External structures and frameworks designed to extend and enhance human abilities can be found in numerous aspects of our lives. Examples include various types of maps, implementation of established routines for raising children, and the organization of computer data and files which serve as extensions of our memory and performance capabilities.

In the context of teaching and learning, when the delivered content is well-structured and correlates closely with the problem-solving process, students can address their informational needs more efficiently and effectively, leading to sustainable changes in their lifestyle. However, for this to be achieved, the structure needs to be easily visualized, memorable, and adaptable.

In terms of AI and use of LLMs, providing an a priori top-down structure is missing. The Atkinson Conceptual Framework provides this a priori top-down structure for content analysis and flexible organization.

For a business to conserve resources, having a structured approach is crucial. Our experience in the pharmaceutical sector illustrates this. Over several years, as we secured contracts, many courses we were creating resembled ones we had previously developed. There was no need to start from the ground up every time.

SECTION 3: ESSENCE

Question 3.0: What is the visual representation of this structure and why is the Atkinson Conceptual Framework an optimal configuration?

Answer 3.0: It is a cube composed of smaller cubes, like the Rubik's Cube.

Elaboration 3.0: This is a 3D conceptual cube that allocates and organizes teaching and learning content in a more useful way. It looks like a Rubik's cube with embedded expandable cubes (Figure 1). The entire framework is displayed as a 3D visual representation based on the whole brain, providing the ideation scaffolding for major human intelligence in the human mind, artificial intelligence in a machine, and physical intelligence in the storage/library system.

We're building a Universal Repository of Learning (URL) comprised of embedded macro and microstructures. The URL will provide a database utilizing a comprehensive taxonomy and will host accessible and affordable Teaching and Learning programs for training and skills development.

Figure 1:
Atkinson Conceptual Framework – Macrostructure
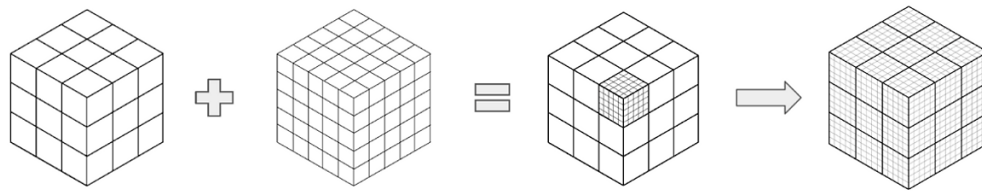
The macrostructure applies to the technology that holds the structure for the URL. It is composed of a 3 by 3 cube that organizes content around Protocol, Platform and Palace (aka Knowledge and Skills Library), and sub-categories that define the Protocol Steps, Platform Layers and Palace Divisions. (See Figure 2 Below) These 5 sub-categories organize the libraries, curricula, courses, and lessons to facilitate training and the acquisition of maintainable skills.

Figure 2:
Atkinson Conceptual Framework – Macrostructure Layers
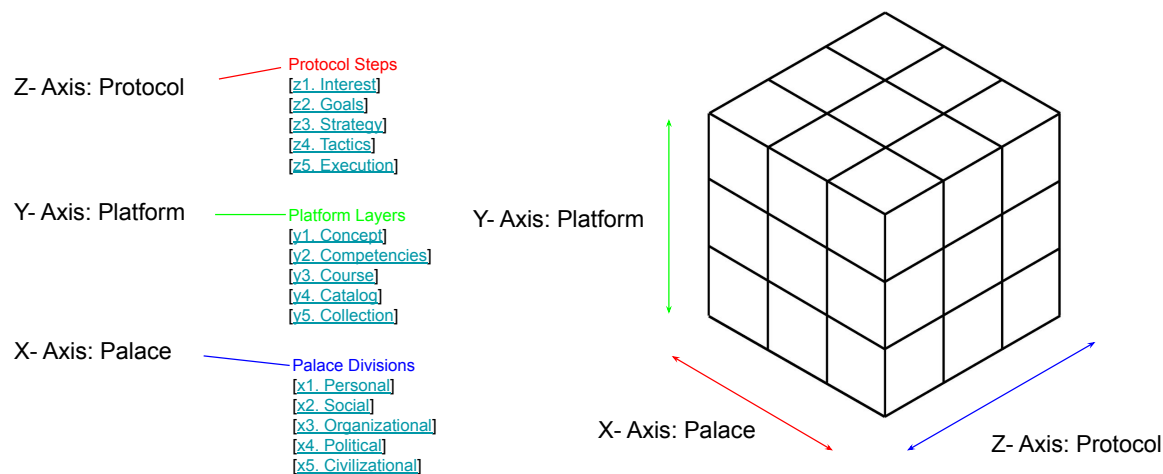
The Microstructure applies to each teaching and learning component that is stored in the URL. It is defined by the Atkinson Conceptual Framework. It is a 7x7 chart. It is a 2D map for the deconstruction and transformation process applied to content, to optimize teaching and learning materials and processes for the user. This 2D map applies to all types of content and optimizes teaching and learning materials and processes.

The 2D map combines the well-established and proven program development process of Analysis, Design, Development Implementation and Evaluation (ADDIE) (along the X-axis)

and the equally well demonstrated Problem Solving Process of Interest, Goals, Strategy, Tactics and Execution (along the Y-axis). To each of these is added both a Planning Phase and a Maintenance Phase (PADDIEM and PIGSTEM). Its organizing principle is of an engineering input output process, where the construction can be described in engineering terms (see Figure 3).

Figure 3:
Atkinson Conceptual Framework - Microstructure

	P Plan	**A** Analysis	**D** Design	**D** Development	**I** Implement	**E** Evaluation	**M** Maintenance
P Plan	1 INPUT — WHO Audience Content	8 Skills Protocol	15 Knowledge Platform	22 Performance Palace	29 Practice Process	36 Proof Pilot	43 OUTPUT
		Learning Transformation					
I Interest	2 WHY	9 Step 1: Interest	16 Layer 1: Concepts	23 Act 1: Beginning	30 Session 1: Focus | Inspiration Pain | Dreams	37 Application 1: Interest	44 WHY
G Goals	3 WHAT	10 Step 2: Goals	17 Layer 2: Competency	24 Act 2: Obstacles	31 Session 2: Priorities | Aspirations Obstacles | Opportunities	38 Application 2: Goals	45 WHAT
S Strategy	4 HOW	11 Step 3: Strategy	18 Layer 3: Curriculum	25 Act 3: Crisis/ Vision	32 Session 3: Results | Vision Problem | Opportunity	39 Application 3: Strategy	46 HOW
T Tactics	5 WHERE	12 Step 4: Tactics	19 Layer 4: Catalog	26 Act 4: Resolution	33 Session 4: Projects | Proposals Tools | Teams	40 Application 4: Tactics	47 WHERE
E Execution	6 WHEN	13 Step 5: Execution	20 Layer 5: Library	27 Act 5: End	34 Session 5: Tactics | Strategy Interest | Goals	41 Application 5: Execution	48 WHEN
		Learning Transformation					
M Maintenance	7 OUTPUT THEN	14 "Say and Do"	21 "Know and Understand"	28 "Show and Tell Story"	35 "Try and Use"	42 "Apply and Transfer"	49 OUTPUT Routinized Use

(Left and right vertical bands labeled: Problem Solving Deconstruction)

Question 3.1: Is the Atkinson Conceptual Framework a fixed or flexible framework?

Answer 3.1: It is a flexible, personalizable and customizable structure for learners, content providers and software platforms.

Elaboration 3.1: Indeed, human intellectual and learning capabilities are strengthened not only by internal biological structures and external tools, but also significantly by acknowledging and responding to individual uniqueness. This approach underpins the importance of fostering lasting change: by creating a teaching and learning environment that promotes autonomy and self-motivation.

We can view this as a conceptual technological framework. This framework is structured in a manner that permits organized and trackable content. Importantly, it provides the flexibility for the content provider or user to create a customized learning roadmap. It allows individuals to meet their unique needs for personal growth and transformation in a personalized way. It

could also be used as a foundation for Training the Trainers to provide the scaffolding for effective training delivery.

SECTION 4: NEEDS, FEATURES AND BENEFITS

Question 4.0: How does the Atkinson Conceptual Framework meet the needs of individuals that are overwhelmed with an overabundance of information and what are its Features and Benefits as a teaching and learning tool?

Answer 4.0: The common denominators of this Conceptual Framework are symmetry, standardization, and simplicity. A list of needs, features and benefits will be detailed and described below.

Elaboration 4.0: This technology is being built based on a single, symmetrical, visualizable, and integrated architecture, that is designed to contain teaching and learning content developed and converted into an organized and structured database form, so that it can be accessed by the end-user as a personal learning map to optimize self-development and effect behavioural change. Organizing along these principals greatly facilitates delivery via automatized models (AI) and access of personalized information on the individual level.

This architecture is:

i. Symmetrical – It is composed of similar parts around three axes, which organize information in an easily visualized, imbedded cube-like structure from the macro level of the Universal Repository of Learning (see figure 1 above) to the micro level (see figure 3 above) of specific content lessons. Symmetry makes content easier to develop, retrieve and learn across varied subject matter, and allows both the system and user to become more adept at accessing the specific content required.

ii. Expandable – Specific courses and content can expand, or contract based on the demands and complexity of the specific teaching and learning materials required of each. It is both rigid, to meet database requirements, and flexible, to deliver personalized content.

iii. Visualizable – The Atkinson Conceptual Framework is organized as a repeating cubic-structure, which makes it a very easy structure to visualize and retain.

iv. Memorable – Memory abilities are greatly improved with a strong visualization support and with an organized structure for storing and integrating content. The better the visualization support and repetitiveness of the organizational structure, the more memory abilities are improved.

v. Contextual – The Conceptual Framework can adapt to the specific circumstances of an event and can facilitate and connect feedback and data with your daily routine. It can also adapt to the specific circumstances of an event and permit communication with

third parties that provide other sources of data related to the user's routine for learning acquisition and maintenance.

vi.   Customizable – The architecture is flexible to assist both the developer and the user in their process of creating a meaningful learning roadmap with autonomy, based on personal transformational needs.

vii.   Integratable – Teaching and learning material integrates conceptual knowledge, necessary skills to be developed, performance, practice, and maintenance procedures. It also integrates learning from different life-contexts in a customizable way.

viii.   Translatable – The content can easily be translated into any other language.

ix.   Shareable – Just like any other digital and online content, the content within this structure can be easily shared and accessed based on communication protocols and data protection policies to be defined on a case-by-case basis.

x.   Multi-purpose – This architecture can be used for enhancing human intelligence, artificial intelligence, and physical deployment of courses, content, and lessons.

xi.   Effective – The microstructure, the skills acquisition level, combines proven Development Process (P-ADDIE-M) with Mental Leaning Process (P-IGST-M) to achieve increased learning success in a 2D chart for instructional design.

xii.   Measurable – The microstructure of the Atkinson Conceptual Framework includes metrics for evaluating the success of skill acquisition and maintenance and allows for continuous improvement of the learning materials.

Question 4.1: Is the Atkinson Conceptual Framework informed by the processes of human learning?

Answer 4.1: Yes, the Atkinson Conceptual Framework has been developed and refined from over 80 years of research and notable work.

Elaboration 4.1: This research and work includes but is not limited to notable work by Vannevar Bush ("As We May Think"), Douglas Engelbart (Conceptual Framework for Human Intelligence) B.F. Skinner (Operant Conditioning), David Padua (Chaos Theory), Roger Sperry (Thinking Preferences) and Ned Herrmann (Whole Brain Creative Thinking) and Charles Atkinson (Database Learning).

Question 4.2: Who are the competitors of the Atkinson Conceptual Framework?

Answer 4.2: Learning repositories, such as Wikipedia, OpenAI, Khan Academy, training industry, tech tools for changing habits, etc.

Elaboration 4.2: Based on preliminary market research, learning repositories can be divided into two main types:

The first type emphasizes conceptual knowledge. This category includes platforms like Wikipedia, Khan Academy, and HarvardX, which offer online learning courses across a wide array of disciplines. The popularity and development of such platforms continue to grow, expanding the online learning landscape.

The second type of learning repository is performance-oriented, with a focus on skills development aimed at empowering the workforce and enhancing organizational capabilities or to individuals for one-off solutions. These platforms, such as those in the training industry, are designed to motivate users towards adopting new action plans, healthier daily routines, and more adaptive behaviors. Such as:

- Diet Therapy
- Smoke Cessation
- Psychotherapy
- Exercise Therapy

Question 4.3: What differentiates the Atkinson Conceptual Framework?

Answer 4.3: Our technology stands out from previously discussed examples. It not only merges various domains of Learning and Teaching material but does so in a structured manner, enabling content providers and users to design personalized learning roadmaps. With the Atkinson Conceptual Framework, as users identify and select content, the system seamlessly combines knowledge-based and action-based curricula. Instead of separating theoretical knowledge from practical insights, our technology views both as crucial for enhancing the effectiveness of Learning and Teaching. It understands that understanding the rationale behind an action is as essential as mastering the action itself to influence behavior.

Elaboration 4.3: Noteworthy features of the Atkinson Conceptual Framework:

- The Atkinson Conceptual Framework is a strong foundation not only to augment the human intellect through learning, teaching and transformation, but also to serve artificial intelligence agents. It provides a top-down organization of teaching and learning content which could be beneficial to Large Language Model applications. The Framework also provides for an integration between NHI and AI.

- The Atkinson Conceptual Framework is useful not only to end-users, but also to content providers to organize and deliver their material. This is a framework that unlocks the potential of teaching and learning for everyone.

- This concept is realized as a tech tool that presents content intuitively and visually. Users can tailor it to their needs, serving as a personal blueprint for transformation.

- The system harmoniously fuses various knowledge types, relevant across daily life scenarios like nutrition, sleep, home life, work, travel, mindset, recreation, and technology

use. This holistic integration fosters a sense of unity, crucial for internal alignment, motivation, and overall well-being.

- The Framework also provides a microstructure for organizing content of specific teaching and Learning material, facilitating the acquisition of new knowledge and the implementation of new habits.

SECTION 5: ADVANTAGES

Question 5.0: How will implementing the Atkinson Conceptual Framework benefit Teaching and Learning and facilitate the utilization of Artificial Intelligence combined with Natural Human Intelligence?

Answer 5.0: By having a structured universal, integrated, organized repository of learning that organizes content in a top-down fashion deliverable to each user in a personalized sequence and format.

Elaboration 5.0: For humans, this framework is designed to enhance human self-learning capabilities and autonomy. It allows individuals to define their own personalized skill development paths, essential for personal growth and transformation. Autonomy is central to learning, self-development, motivation, transformation, and success. This technology acts like a digital and cognitive map of personal skills, by having content well-structured, organized, visualizable and memorable, extending human intellect by providing a navigational tool with a focus on behavioral change. It also includes metrics for evaluating the success of skill acquisition and maintenance.

For Machines, the Atkinson Conceptual Framework will also provide Large Language Models (LLMs) with a system to store all prompts and responses in a comprehensive learning repository. The Conceptual Framework enables the breakdown and distillation of all necessary competencies for any subject matter, be it a book, lesson, or curriculum. It further facilitates the creation of a curriculum network, using defined properties to interconnect elements.

Pre-organized teaching and learning content significantly boosts the efficiency of AI systems. When educational materials are systematically structured and categorized in advance, it allows AI to more quickly and accurately extract meaningful insights. This not only speeds up the learning process but also reduces the computational resources required. In other words, a well-organized content framework enables AI to produce desired results using less computing power, making the entire process more sustainable and cost-effective.

Question 5.1: Why will the market adopt the Atkinson Conceptual Framework as a foundation model?

Answer 5.1: The Atkinson Conceptual Framework presents unique value propositions not by inventing something entirely new, but by advocating a transition towards a universal structure that benefits all stakeholders: content providers, end-users, researchers in human and machine learning, as well as AI companies. This comprehensive structure has the potential to elevate learning systems and overall quality of life by promoting a higher level of integration and cross-communication.

Elaboration 5.1: Not reinventing the wheel: the Atkinson Conceptual Framework is an organizing structure for allocating, developing, storing, and manipulating teaching and learning material in an economic manner, using existing resources (Figure 4).

Figure 4
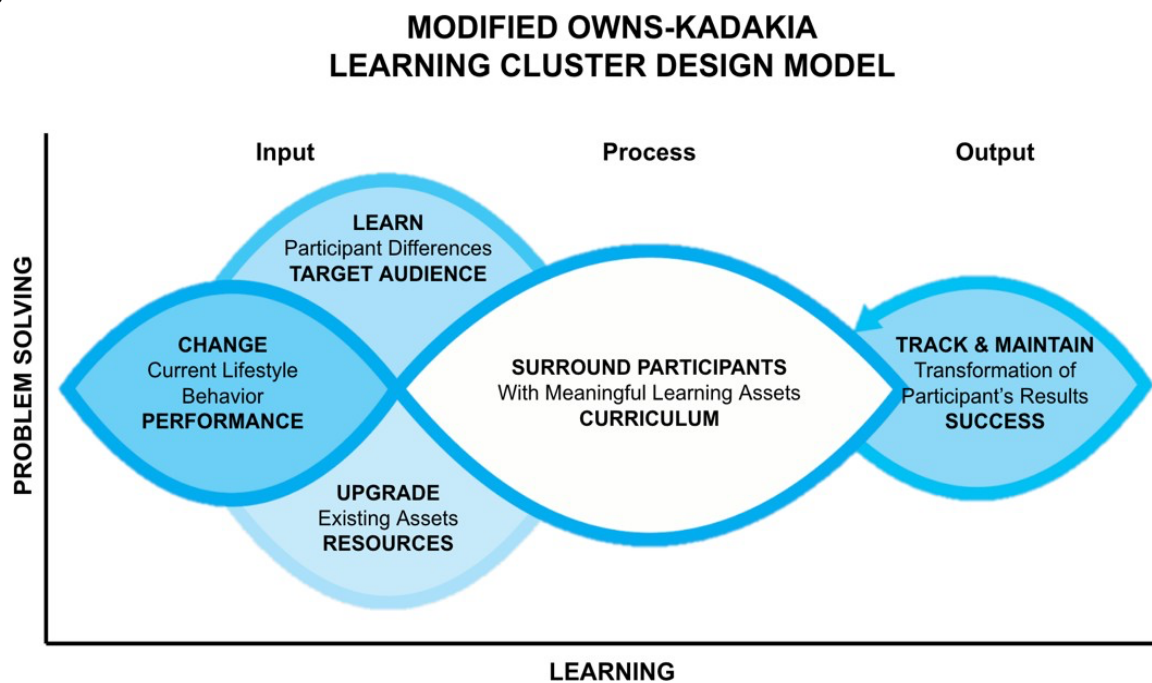
Owens-Kadakia Learning Cluster Design Model. Copyright 2020.

The Owns-Kadakia Learning Cluster Model's input matches that of the Atkinson Conceptual Framework. Both models evaluate the target audience, define the desired performance change, and assess current resources to pinpoint necessary changes and gaps. This is done using the PADDIEM instructional systems development and engineering process.

SECTION 6: LAUNCH PARTNERS

Question 6.0: What is the value proposition for each potential client or partner?

Answer 6.0: We have identified three critical partners for development and application of the Atkinson Conceptual Framework. These are: 1.) Technology and AI companies that have platforms, software, and systems, 2.) Content Providers, and 3.) Organizations and Companies who have access to end users.

Elaboration 6.0

Figure 5: Value Proposition Delineation for each developmental partner:

1.) For technology and AI companies, **who** want to optimize their algorithms and advance the development of next step LLM applications, this technology **provides** a structure for organizing prompts in a top-down flexible manner, **that** advances the capabilities of data-driven algorithms based on an understanding of human intelligence. **Unlike** current data-driven big data algorithms, **our** technology provides the structure that is necessary for achieving an optimized collaboration between humans and machines.

2.) For content providers, **who** want to provide their content in a way that the user will maximize their learning ability and behavioral change, this technology **is** a universal structured teaching and learning repository **that** supports both trainers in training and learners in learning. **Unlike** existing learning technologies that are skills-specific, **our** technology provides a global inclusive integrable and multi-purpose structure for teaching and learning.

3.) For organizations and companies **who** have access to end users who want to enhance their learning about a given topic and/or improve their lifestyle and well-being, the technology **offers** an integrated and complete curriculum structure **that** is customizable according to individual context and needs. **Unlike** other technologies, **ours** addresses behavioral change supported by knowledge, beliefs, skills, performance, and maintenance to achieve healthier outcomes in a variety of significant life domains.

Question 6.1: How will The Whole Brain Foundation collaborate with its partners to implement the Atkinson Conceptual Framework?

Answer 6.1: The Whole Brain Foundation and its team (refer to Appendix A) will collaborate with partners to create a detailed training curriculum. This curriculum will target specific objectives like managing celiac disease and will also encompass broader personal lifestyle skills. Topics will include diet, stress management, sleep, exercise, overall wellness, communication skills, and more.

Question 6.2: How is the implementation of the Atkinson Conceptual Framework being approached, and how will collaboration with major tech companies (including OpenAI) influence its development and capabilities?

Answer 6.2: Implementing the Atkinson Conceptual Framework is an ongoing collaborative initiative across diverse partners aimed at implementing a Common Architecture and Learning Technology Ecosystem. Each partner would bring their unique capabilities and resources within a foundational model to improve teaching and learning and effective behavioral change.

Elaboration 6.2: By partnering with companies such as Google, Microsoft, and OpenAI and utilizing Large Language Models, we can incorporate AI enhancements into software based on neuron-level neuro-link brain architecture. This approach taps into the brain's macro-structure — a unique layer that these companies have not yet fully explored. Our system is user-friendly and designed with a human-centric approach.

By adopting current LLM technology, we will contribute a Taxonomy and Framework that they currently lack, but which can be universally applied across platforms to stimulate accelerated growth. This unified approach outpaces the piecemeal progress possible from countless isolated improvements to various LLM applications. Indeed, organization is key to success in this endeavor.

Question 6.3: What is a possible road map for implementing the Atkinson Conceptual Framework?

1. Find appropriate developmental partners.
2. Build a curriculum which could be bundled into a configuration of technology.
3. Develop a curriculum course catalog based on the whole brain 3D structure.
4. Provide consulting services on the learning technology ecosystem architecture issues for each client and how our 3D Whole Brain conceptual framework would impact reframing a rethinking of their architecture.
5. Use the Atkinson Conceptual Framework to audit what exists, what could be improved, what doesn't exist.
6. Build a database learning systems business to offer curricula on all subjects to all people using contributions from different organizations:

7. Explore other applications for the 3D architecture such as a 3D classroom, a 3D library in the Metaverse etc.
8. Leverage changes in healthcare delivery to provide medical and hospital services at home.
9. Enable curriculum development within App Store model.

Section 7: Summary and Vision

The services generated by this endeavor will be compatible and integratable into a single Universal Repository of Learning. In essence, what we're proposing is a uniform structure for curricula and courses into one URL. This common structure ensures seamless integration since the foundational design remains consistent across all knowledge areas and components.

Unlike previous standardization efforts, such as SCORM, which primarily focused on learning objectives without considering the unified technology hardware and software, our approach is more holistic. Think of it as an enhanced and improved "Wikipedia for training", built around the proven Analysis, Design, Development, Implementation and Evaluation process combined with a 3D Whole Brain framework.

As the pursuit of artificial general intelligence and AI intensifies (a "race to the Singularity", in Kurzweil's terms), our approach diverges from the idea that the brain is confined within the skull. Instead, we align with Andy Clark and David Chalmers' theory that the mind is both internal and external, expanding in ways that AI currently cannot.

This shared architecture will result in a consistent organizing structure that would also allow for comparative studies across different subject matters, and pathways to continuous improvement.

APPENDIX A: THE WHOLE BRAIN FOUNDATION TEAM

|	
Charlie Atkinson	EdD, Harvard University. Serial entrepreneur of learning system companies. Author of "The Learning Systems Repository: A Conceptual Framework." Developer of the Atkinson Conceptual Framework
Tita Beal	Designs and writes interactive learning programs to develop performance. Worked with Charlie Atkinson at Basic Systems/Xerox Learning Systems and also as an instructional designer developing performance at all levels for JP Morgan, Pfizer and American Management Assn before starting her consulting practice
Celia Black	Chief Marketing Officer and former Vice President Business Development at Kurzweil Technologies, the AI innovation hub founded by visionary Ray Kurzweil. Played a pivotal role in the development of the KNFB Reader and acclaimed publications including "The Singularity is Near" and "How To Create a Mind". Instrumental in establishing Singularity University.
Dennis Bonilla	Dean, Wiley Education Services; Global mthree Academy. Fellow of the Future Workplace Network. Industry-recognized Digital Learning & Technology Transformation Strategist. Formerly, Executive Dean at the University of Phoenix for the College of Information Systems and Technology and the School of Business.
Andrew Farrar	Previously Vice President, The Whole Brain Corporation, Founder and President HandsOnToys, currently Managing Partner at HandsOnConsulting a digital and TV marketer of direct-to-consumer products.
Hyo Kahng	Co-Inventor of International Patent: Method for Creating a Visual Representation of Knowledge. Skilled in Python, HTML/CSS, Adobe Creative Suite, and G Suite. Front-end development and communication professional with a Bachelor of Arts (BA) in Graphic Design from Boston University.
Sofia Leite	Translational Researcher in Health and Learning Technologies. PhD in Biomedical Engineering w/Fulbright grant at Harvard Medical School, licensed clinical psychologist. Involved in research related to psychology informed AI, remote monitoring, neurophysiology, and technology applied to mental health. Worked with Microsoft Portugal in the development of Human-Machine Interaction systems to benefit end-users quality of life.
Malcolm MacKay	Director, lawyer, government official and businessman. Substantial experience in the health insurance area. Was senior vice president of both the NY Life Insurance Company and Blue Cross and Blue Shield of Greater New York, and was a state health insurance regulator.
Egils Milbergs	Expert in governmental and non-profit sector focused on Innovation, economic development, and U.S. competitiveness. Founder, Center for Accelerating Innovation (behavioral health). Co-founder, Healthy Communities and Wellness Alliance (Social determinants of health; OZ Accelerator (mentorship for start-ups in low-income communities); and PureBlue (entrepreneurs working on clean water solutions).
Conrad Plympton	50-year career marked by an emphasis on innovation and entrepreneurship, with a focus on applied science and technology. Currently active globally as a business owner and angel investor, helping universities commercialize their research.
Brian Sellstrom	Previously Chairman and CEO AchieveGlobal, VP/GM McGraw-Hill Training Group, CEO DC Shoes/TransWorld Media, EVP Active Interest Media

Graphic Summary from the Provisional Patent Application
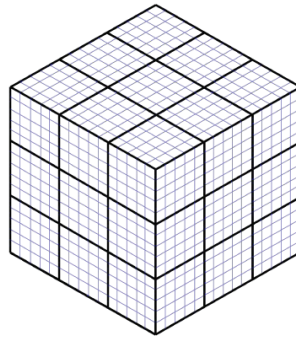
The Atkinson Protocol

1 Dimension (1D)
Z- Axis-- Process for Problem Solving

Past	Present	Future
Back	Intersection	Forward
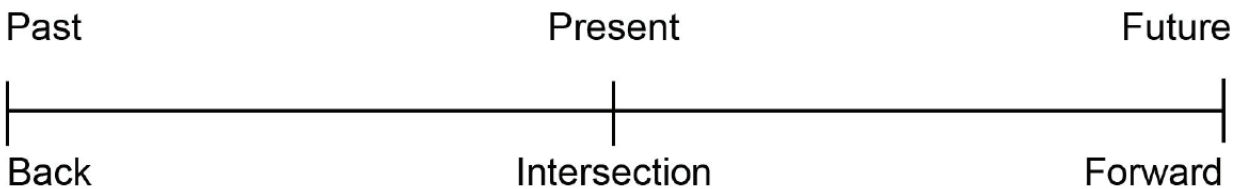
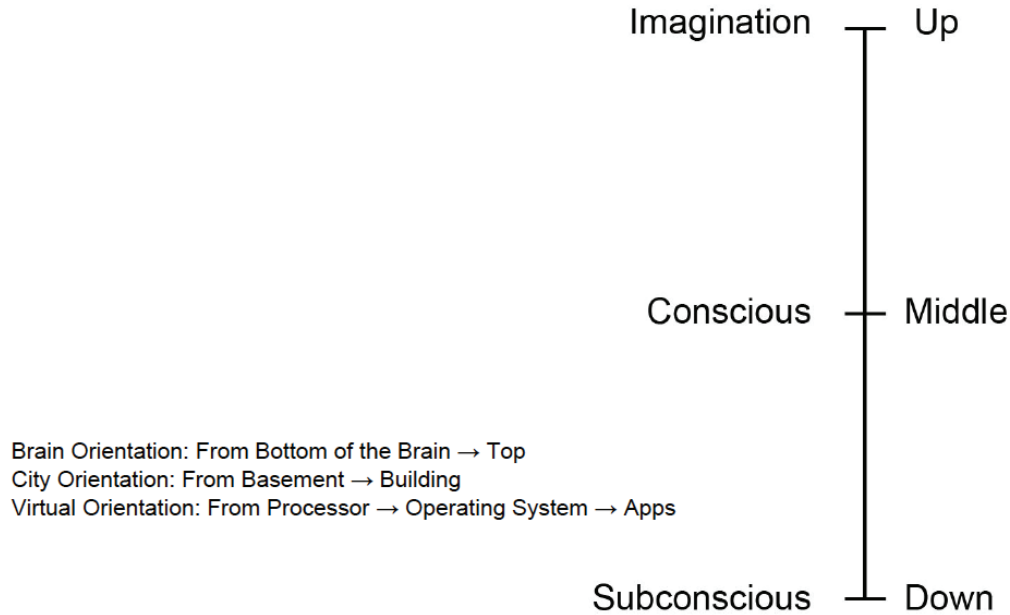Brain Orientation: From Back of the Brain → Front
City Orientation: From Downtown → Uptown
Virtual Orientation: From Digital → Conceptual
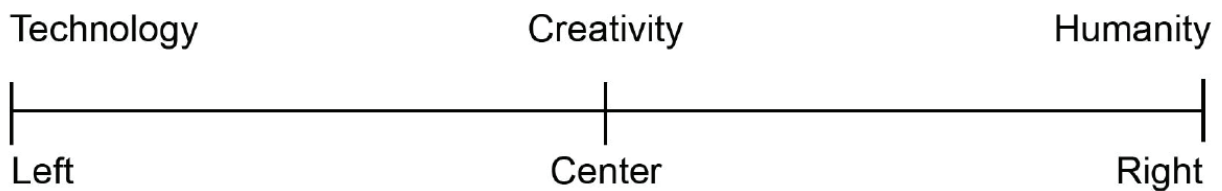
The Atkinson Platform

2 Dimension (2D)

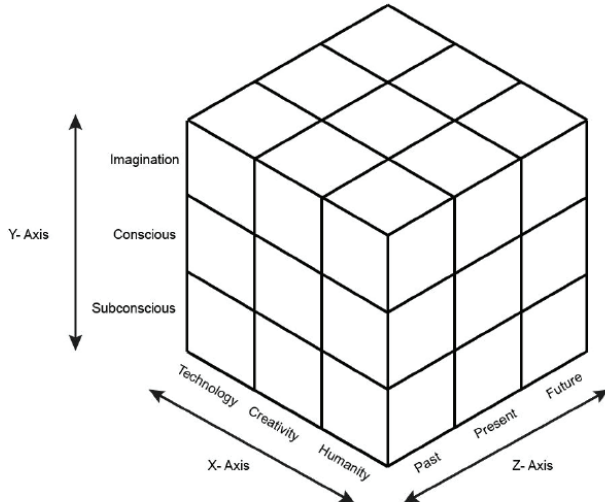Y- Axis-- Vertical Hierarchy for Organizing Concepts

```
Imagination  ──┬── Up



Conscious    ──┼── Middle



Subconscious ──┴── Down
```

Brain Orientation: From Bottom of the Brain → Top
City Orientation: From Basement → Building
Virtual Orientation: From Processor → Operating System → Apps

The Atkinson Palace

3 Dimension (3D)

X- Axis-- Horizontal Category for Classifying Technology, Creativity, and Humanity

```
Technology          Creativity          Humanity
    ├───────────────────┼───────────────────┤
Left                  Center                Right
```

Brain Orientation: From Left of the Brain → Right
City Orientation: From Left Side → Right Side
Virtual Orientation: From Technology → Creativity → Humanity

The Atkinson Platform

4 Dimension (4D)

W- Axis-- Charlie's Conceptual Cube (X + Y + Z Axis): Systematizing Perspectives, The Whole System

Y- Axis: Imagination, Conscious, Subconscious

X- Axis: Technology, Creativity, Humanity

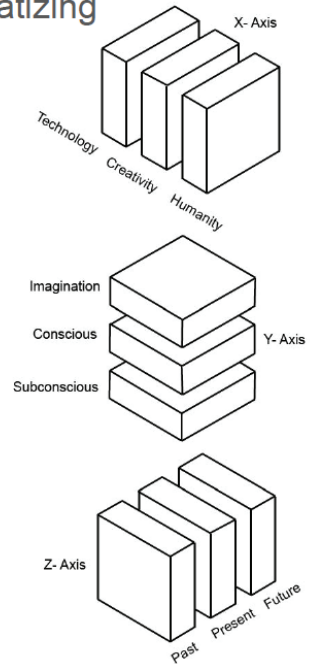Z- Axis: Past, Present, Future

9 User Views

X- Axis
1. Humanity
2. Creativity
3. Technology

Y- Axis
4. Subconscious
5. Conscious
6. Imagination

Z- Axis
7. Past
8. Present
9. Future

Brain Orientation: Simultaneous User View of Three Dimensions and Axes
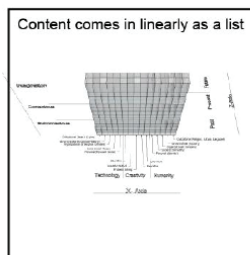City Orientation: Simultaneous User View of the Intersection
Virtual Orientation: Simultaneous User View of the The Whole System

The Whole Connected Health System
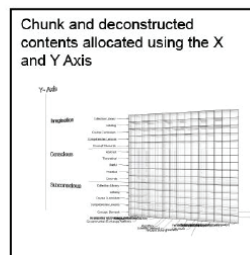
5 Dimension (5D)

V- Axis Transformation, The Atkinson Artificial Mind
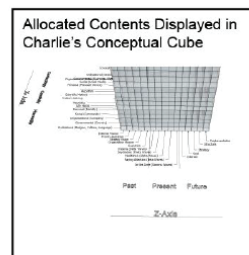
1d. California Cornucopia of Contents	2d. Cambridge Curator of Concepts	3d. Bostom Common Display	4d. Washington D.C. Delivery of Courses	5d. Manhattan Database Learning System
Content comes in linearly as a list	Chunk and deconstructed contents allocated using the X and Y Axis	Allocated Contents Displayed in Charlie's Conceptual Cube	Course examples of course delivery	Manages all five steps

Divisions of X- Axis Category
Humanity (Right)
- Civilizational
- Governmental
- Organizational
- Social
- Personal

Creativity (Center)
- Life Hacks
- Heuristics
- Problem Solving
- Scientific
- Algorithm

Technology (Left)
- Personal Device
- Social Media
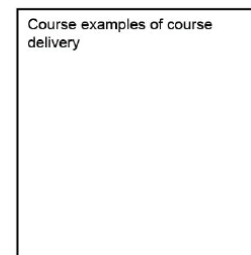- Enterprise Software
- Exchange Platform
- Search Engine

Divisions of Y- Axis Hierarchy
Imagination (Up)
- Collection/ Library
- Catalog
- Course Curriculumn
- Competencies Lessons
- Concept Elements

Conscious (Middle)
- Abstract
- Theoretical
- Useful
- Practical
- Concrete

Subconscious (Down)
- Collection/ Library
- Catalog
- Course Curriculum
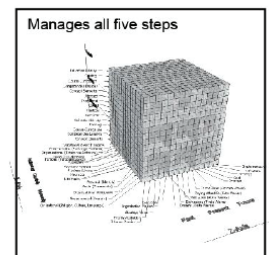- Competencies Lessons
- Concept Elements

Divisions of Z- Axis Process
Future Steps (Forward)
- Implementation
- Structure
- Strategy
- Goal
- Interest

Present Status (Intersection)
- In the Zone (Gamma Waves)
- Paying Attention (Beta Waves)
- Meditation (Alpha Waves)
- Daydreams (Theta Waves)
- Dreams (Delta Waves)

Past Story (Down)
- Execution
- Organization Mission
- Strategy Vision
- Priority Aspiration
- Interest Passion