

Higher College of Technology

Pedagogical Framework

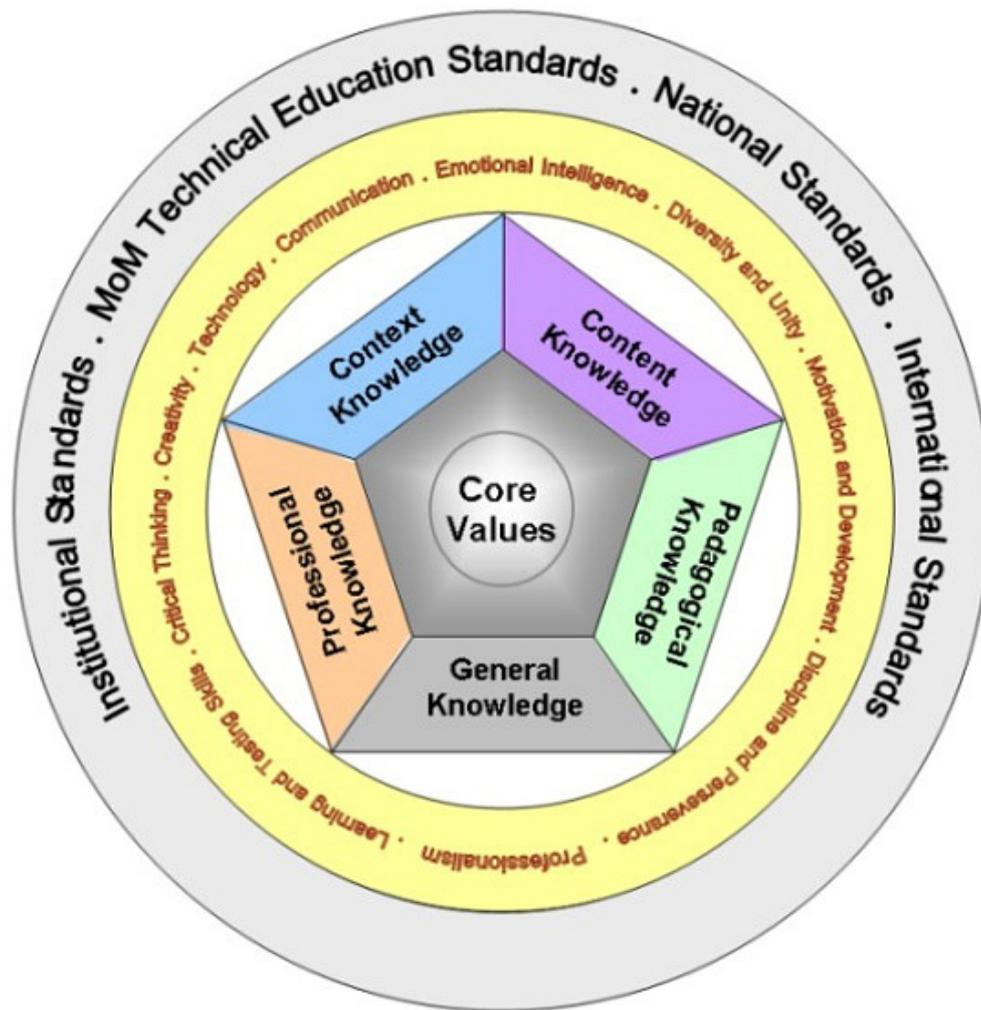


Figure 1: Pedagogical Framework Graphic

1 Introduction

The above graphic is a visualization of the teaching and learning philosophy of Higher College of Technology (HCT). Centered around core values, nine characterizing strands define the pedagogical identity of the College. These are built over a sound foundation of knowledge in its various forms: content, context, general, pedagogical and professional knowledge. This whole layered theme is placed in the context of standards. These are institutional standards, Ministry of Manpower technical education standards, national standards, and international standards, respectively.

1.1 Framework Development

The pedagogical framework, or interchangeably, the conceptual framework for teaching and learning, was developed to set a theoretical standard for teaching and learning in the College and to state in writing the intellectual identity of the College with regard to teaching and learning.

The framework reflects the history of the College and evolution of its pedagogical practices over the years, captures the wisdom of past and current experiences, and sets a direction for the future. It was developed by the QA Core Team in light of the previous conceptual framework for teaching and learning. The pedagogical framework is constantly under review and further development by all faculty and staff members at the College.

The remaining of this document is dedicated to discussion of the main components of the framework in order: the essential core, the knowledge foundation, the main themes characterizing the pedagogical philosophy of the College, and finally the standards as an influential context within which the foundation and themes layers are placed.

2 Components of the Framework

2.1 The Core: Values and Belief System

At the heart of the conceptual framework for teaching and learning at HCT lies the core values system. Firmly rooted in the great teachings of Islam, the core values are reflective of the identity of our society. In concert with the College values, these core values are not only celebrated for their own sake but also for the vital role they play in shaping the teaching and learning experience at the College. The values of honesty, integrity, patience, perseverance and accountability are core values that positively enhance teaching and learning and go hand-in-hand with recent learning models such as collaborative learning, cooperative learning, and distance learning. The belief system and core values form the foundation stone for professional ethics. Stemming from the value pillars, College professionals set out a model of ethical conduct. This is declared in respect of others, tolerance, equitable learning opportunities for all learners, observing intellectual property and copyright, and holding to a high ethical standard in all aspects of work. Emphasizing the core values in all aspects of teaching and learning and practicing these values in the every day teaching and learning activities markedly characterizes the teaching and learning experience at HCT. As teaching is one of the highest professions, and learning is one of the main facets of human growth and development, interweaving these with the belief and value system adds great value to the final product: educators and learners that are enjoying, in addition to knowledge, the ability to discern, make guided decisions and act appropriately in a complex world.

2.2 Knowledge: A Quintuple Foundation

Knowledge is a primary component of the pedagogical framework for Higher College of Technology. The knowledge foundation does not mean acquisition of abstract knowledge only, but also knowledge evaluation, sharing, updating, and application and the skills needed to impart this knowledge to all learners.

The discussion of each knowledge type below applies to the College learning community consisting of educators and learners, as well as to programs and curricula.

2.2.1 Content Knowledge

Educators in various pedagogical roles have deep knowledge in their chosen fields. In addition to depth in their field of expertise, educators at Higher College of Technology have a breadth of knowledge in the arts and sciences and a broad knowledge in key areas such as language and communication. This knowledge promotes teacher confidence, facilitates learners' understanding, and triggers students' interest in the subject. Content knowledge is emphasized from the very start when candidates for pedagogical roles are selected, when observing the educator's performance, and when nominating individuals for recognition and promotion.

Content knowledge is the backbone constituent of education in the College. A significant part of students' education at the College is dedicated to content knowledge acquisition and the skills needed to use this knowledge in their future careers.

Mastery of content knowledge implies the ability to update this knowledge and remain current in the field. It also implies the ability to make contributions to the field, to understand others' innovation, to research and embark on new initiatives, and to exchange ideas and collaborate with other scholars and practitioners.

Students and faculty participation in College, national, regional, and international events such as competitions and conferences is a venue for content knowledge sharing, application, and growth.

2.2.2 Context Knowledge

The term context knowledge is inclusive of all issues relevant to the learning environment and pedagogical context. This includes a wide spectrum of issues ranging from pure pedagogical to pure practical concerns. For example, context knowledge may include knowledge of students' pre-college educational background (especially for teachers with different educational experience), knowledge of the history of the College and evolution of its programs, knowledge of the country and norms of the society, cultural aspects of the learning experience, special needs, the local market, stakeholders and partners, etc. HCT educators are inducted about general issues upon joining the College. Specific inductions are provided within each department. Every member of the College learning community is expected to acquire context knowledge by research, inquiry, interaction with other learners (whether students, other educators or colleagues), and active participation in the College teaching and learning processes.

2.2.3 General Knowledge

The pedagogical philosophy of Higher College of Technology follows a holistic approach. This is clearly indicated in the knowledge foundation of the framework. In addition to the needed content and context knowledge, educators play vital multi-faceted roles where they are expected to image thorough knowledge in matters of general interest. These include culture; religion; history; world geography and nations; health, safety and environment; international bodies and independent organizations; and an understanding of different political systems. This general knowledge is necessary in a diverse

learning community such as the one in HCT. It is also important for shaping a well-rounded mentality of the learner. The main focus of education at HCT is not to know too much about too little but rather to know about all in one field and quite enough in all fields, and most importantly to connect these integral types of knowledge and have the skills to update knowledge and apply it creatively.

The confluence of content and context knowledge blended with good knowledge of general matters makes a balanced knowledge foundation.

In addition to the (inevitable) integration of general knowledge into teaching and educational materials, a number of extra-curricular activities that take place in the College sustain general knowledge acquisition and sharing.

2.2.4 Pedagogical Knowledge

As content knowledge needs tools and methods to deliver it, HCT educators are knowledgeable of pedagogy and its fundamental role in effectuating instruction and assessment. At Higher College of Technology, educators demonstrate appropriate pedagogical knowledge and skills in areas of teaching methodologies, assessment techniques and educational measurement, classroom management, curriculum development, instructional design and use of educational technology. They are cognizant of educational psychology, human development, learning theory, behavior and adaptation and their influence on students' learning. This knowledge is integrated in teaching to make delivery more effective and communication between educators and learners more affective. The College organizes workshops and short training programs to strengthen the pedagogical knowledge of its educators and refine their teaching performance. "Educating the Educators" workshop organized annually for new assistant lecturers is an example of progress in this direction.

Furthermore, students and peer evaluations of a teacher's performance concerning pedagogical aspects are systematically included in each academic department's annual review process. The result of this assessment is used to revise and improve teaching.

2.2.5 Professional Knowledge

Professional knowledge completes the quintuple foundation of knowledge. It closes the loop between scholarship, academia, and industry. Educators and learners at HCT enjoy access to a wealth of professional knowledge and information about relevant advancements in industry. Several courses are offered to support professional knowledge acquisition especially in the areas of professional communication and interaction. In addition to credited courses, the Enhancement Training and On-Job-Training programs are examples of efforts serving this cause.

The College maintains strong relationships with industry through its specialization committees, curriculum development committees, and industry consultants. Alumni and employers' surveys are used to gauge the success of the programs offered especially with respect to professional knowledge and professional conduct of graduates.

2.3 Nine Characterizing Strands

2.3.1 Critical Thinking

The pedagogical philosophy of HCT with regard to the role of lecturers and instructors can be summarized in the belief that the main function of educators is to guide

and assist students in attaining knowledge and skills, as they learn about students' different abilities and aptitudes. Teaching processes are designed to develop students' problem solving skills, flexibility and critical thinking as well as professional knowledge and skills. Learning to think critically is therefore emphasized throughout the teaching and learning experience for critical thinking is highly ranked in the mental processes taxonomy.

Observations of the clinical practice suggest that the importance of teachers as instructors will decrease while their role as facilitators of learning, role models and most critically validators of knowledge will increase. Along this line, the teaching philosophy of HCT prioritizes the ability to find one's way in complex systems by finding, judging, and creatively using relevant information over mere acquisition of factual knowledge. This understanding is reflected in the pedagogical identity of the College where critical thinking, self-reflection and "evaluateness" are emphasized across all learning and teaching activities.

Critical thinking is practiced in the self-assessment of the College as a learning organization itself. Together with transparency and commitment to improvement, critical thinking forms the basis for identifying areas for improvement and positive change. The same philosophy is applied in a top-down fashion reaching to the most detailed teaching and learning tasks.

2.3.2 Creativity

Creativity is one of the main themes of the pedagogical framework of HCT. It is perhaps one of the boldest manifestations of mastery of knowledge combined with mental capacity, both of which are supported by the various teaching and learning processes at the College. Educators at HCT encourage creative thinking and award creative initiatives. Delivery and assessment aspects of academic programs give teachers and students enough room for creativity. Additionally, extra-curricular activities further promote creative thoughts and innovations. Members of the learning community demonstrate dispositions of creative thinking and recognize the talents of the diverse learning community. Creativity at HCT is translated in the fine work of students recognized in inter-collegial, national, and regional competitions, and celebrated as honorable representation of the College and its creativity-oriented pedagogical identity.

2.3.3 Technology

In order to realize its vision of providing quality technological education, Higher College of Technology is committed to improving its educational resources and media to support its students in attaining knowledge and skills effectively and efficiently. The College has taken steady steps in application of information and communication technology (ICT).

The deployment of educational technology systems, such as e-learning, by the Higher College of Technology has begun to assist the College to overcome the time and geographic barriers and provide more learning opportunities to students. At the same time better opportunities are provided to lecturers and instructors in tracking students' learning activities. Educators apply their knowledge of technology on one hand and their knowledge of learning objects, content, and instructional design on the other hand to design and present content suitable for use with educational technology such as

e-learning, distance learning and virtual learning. Teaching and learning are enhanced by using self-evaluation and actively engaging students in the creation of content.

In addition to e-learning and its various features such as discussion forums, groups, instant messaging and online chat, HCT applies other technology products and systems such as electronic mail for business communication, and the short messages services for all departments.

The College has a dedicated center to establish and support the ICT infrastructure at the College. Specialists administer and monitor educational and information systems using dedicated hardware and specialized software. Training programs are provided to ensure basic information technology literacy for all educators. Specific training programs are provided according to the need and upon request for using specialized educational soft systems and electronic products.

The College aims to provide basic information technology literacy to all members of the learning community. Advanced technological education is incorporated into specialized education and training programs. The purpose of technology integration at HCT is to have open access to information and educational material and free flow of content which lead to equitable knowledge acquisition and sharing. Adaptation and conditioning of technology is therefore crucial for effective application. The College takes the learners' needs and background and specifics of the learning community into consideration when introducing the use of various technological products and processes. In making sure that the Higher College of Technology delivers required knowledge and skills properly, all learning materials, such as books (hard, electronic, and online), handouts, video and audio materials, are designed with consideration of the students' needs in terms of content, readability and knowledge level. Furthermore, the built-in mechanism for measuring student satisfaction is designed in such a way that provides detailed information on student ability and satisfaction in coping with their education and training programs in all levels. This feedback system assists the departments in making proper decisions in helping students in their knowledge and skills attainment. Technology supports other strands of the pedagogical framework such as diversity, creativity, Emotional Intelligence (EI), and professionalism. It supports diversity by providing more learning alternatives hence serving different learning styles and preferences. It supports creativity by opening doors to innovative options to instruction and assessment. Technology can also support EI by allowing individuals to express their ideas and communicate their emotions at their convenient time and environment. Technology evidently supports professionalism by facilitating planning, productivity, time and resource management and other administrative functions.

2.3.4 Communication

The ability to articulate thoughts is seen as one of the most important faculties of human beings. Educators and learners at Higher College of Technology are informed of the value of communication and its impact on the quality of education. They use their knowledge and skills of verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, scholarly exchange and supportive interaction in the learning community. In addition to the College learning community, College professionals effectively communicate with parents, colleagues, and agencies in the larger community to realize the common goal of intellectual and social growth.

Members of the learning community are encouraged to freely express their opinions,

thoughts, feelings and concerns within acceptable boundaries. This encouragement is exercised informally and formally through communication courses and communication-based coursework.

Students, peer, and management evaluations of educators consider the communication skills. Similarly, suitable weight is given to communication skills when evaluating students' assignments such as projects and presentations.

One of the focus areas of the foundation phase of education at the College is communication. Later in all programs offered by the College, some courses are geared towards improving professional communication skills.

Communication is fused into all strands of the pedagogical framework making a lively learning experience where learners are well-connected through the powerful link of communication and free expression.

2.3.5 Emotional Intelligence (EI)

In accordance with latest research in the areas of human cognition and development, learning theory, and educational psychology, educators and learners at the Higher College of Technology are aware of the importance of emotional intelligence and the serious role it plays in one's career life. This importance especially prevails in the field of education which involves a lot of interaction with others and is largely built on communication among groups and individuals. Teaching and learning processes at the College give considerable weight for developing the social and emotional skills of learners, thereupon, coming to a "wider value-based concept of education." Developing emotional intelligence facilitates effective teaching, learning, personal growth and adjustment, building relationships and healthy exchange in diverse settings. This is made possible by exercising the following:

- **EI competence.** This comprises perceiving emotions and using emotions. Perceiving emotions is an awareness of one's own emotions as well as the emotions of others. This competency involves the ability to perceive and decipher emotions in facial expressions, gestures, body language, words and voices, responses and behavior, and other clues such as cultural artifacts. Using emotions is the ability to channel emotions to facilitate various cognitive activities such as analytical thinking or problem solving. An emotionally intelligent learner can exploit his/her emotional state (mood) in order to adjust and best fit the task at hand.
- **Self-regulation and management:** the ability to express one's feelings and to control emotional impulses. Self management also involves the ability to adapt to changing circumstances. The emotionally intelligent person can harness emotions and manage them to achieve goals instead of getting overwhelmed with negative emotions.
- **Positive outlook/Motivation:** an understanding that life presents each person with choices and that each person has the freedom to choose and is responsible for his/her choices. It is a recognition of that the individual's choices, reactions, decisions and actions that make his or her life experience the way it is.
- **Empathy:** the ability to see things from others' perspectives and put oneself in the position of others.

- Social skills and relationship management: (active) listening to others, understanding others, cooperating as a team member, following agreed-upon guidelines for social relationships. Emotionally intelligent people can practice relationship management with their ability to inspire, influence, develop, and lead others especially in conflicts.

2.3.6 Diversity and Unity

The College learning community celebrates diversity as a feature enriching the teaching and learning experience. Educators and learners understand and appreciate the differences among individuals in the learning community and respond to these differences with respect and dignity. They believe in all students and their ability to learn. Although the student population in the College consists mostly of Omanis, the whole community of educators, students, and personnel playing other pedagogical roles is diverse. Diversity of the learning community at the College is not only nationality-based but also comes from having students and educators from different ethnic, cultural, linguistic, religious (school of thoughts), and socioeconomic backgrounds. This diversity contributes to a colorful learning experience for all. It is considered as strength and cherished as an asset adding value and promoting growth.

Extending the concept of diversity to encompass different learning styles is key for effectuating communication, delivery, and intellectual exchange. Educators at HCT are aware of the different learning style: visual, auditory, and kinetic. Learners are also taught about the different learning styles and are assisted in identifying their own in order to induce a smooth enjoyable learning experience.

Educators at HCT are sensitive in dealing with a diverse population, are knowledgeable about the peculiarities of different groups, and are able to adjust and adapt acceptable responses in different contexts.

Members of the learning community at HCT show respect and support each other regardless of differences, for these are not seen as barriers but as bridges bringing people together. The unity of the learning community is enhanced by this diversity and maintained throughout diverse population and settings. Stakeholders share the same vision, mission, and values. They combine efforts to achieve the common goal of quality education and accessibility to learning opportunities for all.

This strand interweaves with other strands especially emotional intelligence and communication to make an exemplary learning experience.

2.3.7 Motivation and Development

At Higher College of Technology, teaching and learning are dynamic processes, where teachers, instructors, trainers, and students are considered to be part of learning teams. Since learning is a journey not a destination, these learning teams are always in evolution. Learners make continuous efforts to meet the challenges of the information age and stay current in their fields. In their teaching, educators emphasize that education is beyond schooling and that the primary role of College education is to build a solid foundation and plish candidates with the skills that would prepare them to meet the market needs and expectations and would enable them to make contributions to their communities and the nation.

Higher College of Technology creates a motivational environment for educators and learners. Motivation is perceived as a driving force for development. Educators design

motivating learning experiences and incorporate them into the syllabi of the courses they teach. Learners are enthusiastically engaged in these activities. Teachers involve the students not only in the implementation part but also in the design phase. By encouraging healthy inquisitiveness, positive attitude towards learning, leadership, scholarly exchange and sharing of thoughts and information, educators and administration personnel maintain a motivational atmosphere that is conducive to ongoing development. Additionally, excellent educators and learners are recognized and rewarded. This further encourages them to constantly pursue professional development, self-improvement, productivity, and quality work.

Furthermore, the College system has a built-in human resources development mechanism which is used for professional development of lecturing and instructing staff. For teaching faculty, development is focused on the lecturer's field of expertise, curriculum design and development, delivery and assessment techniques, and students guidance methods. The knowledge and skills gained in these programs are employed in the continuous development of educators and learners through the identification of the strengths, weaknesses, opportunities and threats (SWOT).

The pedagogical philosophy of the College reflects the understanding that people working in the College, especially educators, are the key factor in the success of the organization. However, development at Higher College of Technology is not confined to education personnel but naturally extends to programs and curricula. HCT's educational and training programs reflect its aims and objectives, which have been developed on the basis of the evolving Omani labour market and its requirements of knowledge and skills. The College ensures that its programs are developed and updated accordingly. This is done through department committees, councils and cross-College specialization committees.

2.3.8 Professionalism and Discipline

Educators at Higher College of Technology exhibit professional conduct in all aspects of their professional roles. The same applies to individuals playing other professional roles at the College such as instructors, trainers, and academic advisors. Qualities of professional conduct include professional interaction with colleagues, seniors, subordinates, and students and advisees. These qualities also include collaboration and team work skills, punctuality, diligence, and positive attitude. Professional dispositions on the educators' side produce an effect upon students for teaching and learning are mirror practices. It is therefore necessary that candidates of professional roles at the College demonstrate a high level of professionalism and incorporate that in their teaching. These professionals engage in self-reflection in light of professional ethics. They evaluate the effects of their professional decisions and actions on students, students' families, colleagues, and other learners in the community. As a result of this evaluation, they actively seek out opportunities to grow professionally. Demonstrating professionalism requires a great deal of discipline in addition to knowledge and skills. Professionalism, therefore, draws heavily from the values core and intertwines with the other strands especially communication, EI, and motivation and development.

2.3.9 Learning and Testing Skills (Delivery and Assessment)

Learning and testing skills are essential elements of the teaching and learning experience at HCT. These are matched with delivery and assessment techniques on the

educators' side. However, the educator and learner roles are not completely disjoint as the College, as mentioned earlier, is a learning organization at all levels and for all stakeholders including teachers themselves. Proper knowledge acquisition is realized by skills necessary to acquire the knowledge, filter it, retrieve it when needed, and use it in intricate settings to solve problems. Inquiry, reflection, and research skills are examples of skills needed by learners. Study skills and positive attitude towards learning are emphasized in the teaching of any subject at the College. These are skills needed for a life-long learning endeavor where the goal is far beyond the final test. The goal is to prepare graduates who enjoy something more than mere facts and short-term cognitive outcomes, but more importantly the desire to continue learning and the ability to acquire knowledge. Teaching is therefore the "art of making others want to learn." As learning and testing (delivery and assessment) go together, learners and educators at the College develop both learning skills and test taking (or test making) skills. Results of testing the knowledge and understanding of learners can only be reliable when the tests are well designed and when the individual taking the test is equipped with test taking skills. The learner is a candidate of testing whether it is formal or informal testing, whether testing takes place in the College or outside the College, during studies or after graduation. The learner in the College community is prepared for taking tests in their various forms. A learner has the skills of test preparation, test time management, approach for tackling different types of questions, information retrieval, and creative application of previous knowledge and experience to solve problems. The teacher understands the significant role of assessment, the principals of educational measurement, the various assessment techniques, the different testing models (affective vs. cognitive outcomes, normative vs. criterion-based, etc.), the issues of scaling and interpretation of measurements, grading and reporting the grades, and how to use the results of assessment to improve the quality of teaching and thereby learning.

2.4 The Standards Context

The conceptual framework for teaching and learning at HCT is developed in light of key standards. The pedagogical framework is placed within a five-layer standards context. These standards define areas that influence pedagogical theories and practices at the College. Ranging from the closest and going outwards, these are: institutional standards, Ministry of Manpower technical education standards, national standards, and international standards. Taking into consideration the principal and practical impact of these standards, the standards context draws a big picture for the pedagogical framework and places it in perspective. The different scopes of these standards give different yet integral views and enable a comprehensive understanding of factors affecting teaching and learning at the College. Facing the challenges lying in meeting these standards induces quality and implies ceaseless efforts towards improvement. Next is a brief elucidation of these standards and how they encircle pedagogical aspects of HCT experience.

2.4.1 Institutional Standards

Teaching and learning at HCT interweave with many other processes and activities. The College has goals, objectives, standards, and procedures that cover all aspects of a vivid learning organization. These institutional standards shape the immediate context of the pedagogical framework for the College. The aforementioned strands

characterizing the teaching and learning experience at the College are in harmony with the strategic goals and objectives of the College and are clearly orthogonal to institutional standards regarding pedagogy. This embodies matters of identifying current and future learner needs, addressing these needs with effective delivery, exchange and communication, and assessment, encouraging critical thinking and creativity, choosing appropriate technology and properly implementing it, and creating healthy and motivating learning environment that fosters growth and continuous development. The common ground between these standards and the pedagogical framework is translated in the quest for meeting learning objectives and resulting in better learning outcomes for all learners.

2.4.2 Ministry of Manpower Technical Education Standards

The Higher College of Technology is one of several Colleges of Technology under the umbrella of the Ministry of Manpower. The Ministry of Manpower facilitates and manages technical education and vocational training programs in the Sultanate and is also the provider of some of the most important technical education programs through its Colleges of Technology. In pursuing the goal of providing quality technological education, the ministry has put forth a clear vision, mission, and a set of common goals shared by all the Colleges of Technology. HCT, though a distinct unique institution in many ways, aims at fulfilling the shared vision and mission and meeting the technological education standards set by the Ministry of Manpower, in addition to having its own goals and standards. Moreover, the College extends the aim of realizing the shared vision to setting an example of excellence and leadership in its teaching and learning practices. The new B.Tech. program for example, which is now offered by the Colleges of Technology and is credited for moving educational programs at the colleges to a level comparable to most regional and even international offerings, was an initiative that developed closely at HCT. At the implementation level of pedagogy, teaching and learning activities are carried out with these ministerial technological education standards in minds of educators and learners.

2.4.3 National Standards

As the Higher College of Technology is a node in the network of colleges in the nation, pedagogical models and practices implemented in national curricula form a starting point for consideration, comparison, and benchmarking. Concerned official bodies such as the Ministry of Higher Education in Oman (in collaboration with the Ministry of Education and the Ministry of Manpower) have set clear standards for higher education in the Sultanate. Pedagogical models and practices in the College are aligned with these national standards. These include, but are not limited to, issues such as academic programs, their structure and design, delivery and assessment methods, teacher training and professional development, and teaching and learning support. As a step towards meeting these standards, the College is seeking accreditation from Oman Accreditation Council, the official body responsible for external quality assurance and quality enhancement of higher education institutions in the Sultanate of Oman.

2.4.4 International Standards

HCT is a node of yet another wider network of educational institutions: the world's. The College is influenced by international trends in pedagogy and education. In addition to that, factors of industrial change, globalization, information and communication technology revolution, and standardization, have all created new opportunities and also challenges to be taken into account. In today's dynamic world, where everything has an influence on everything else, it became imperative to consider and compare aspects of educational policy plan, existing pedagogical practices, technical infrastructure and future change in pedagogy at the global level. In its continuous self-assessment, the College considers this comparison seriously and carefully benchmarks against world's leading institutions. Moreover, the College is planning for international accreditation of its programs in the long run. This strategic goal is one manifestation of the College understanding of pedagogy and its cross-boundaries nature. Teaching and learning at the College is connected to teaching and learning phenomena in the larger context of the globe, therefore, the pedagogical framework is aligned with international standards, thereby bridging the gap between current pedagogical practices in the College and best pedagogical practices in the world.