CHAPTER I
INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Education plays a fundamental role in any nation's human, social, cultural and economic development. The UN declared education as a human right in 1948 under article 26 by emphasizing that everyone has the right to education, and it shall be free and compulsory, at least in the elementary and fundamental stages. Realizing the importance of education in making the world a better place, many international organizations, NGOs, Civil Societies, and national governments have promoted quality education at various levels. One of the major global initiatives has been the Education for All movement by UNESCO. Under this, multiple programs are initiated to provide quality education for children, youth and adults. Education has been the top priority and is the heart of the Millennium Development Goals and Sustainable Development Goals, and it is reaffirmed in the education 2030 framework of action (UNESCO, 2015). To achieve sustainable development and global peace, the world needs a new generation with intercultural understanding and 21st -century skills, who can make informed decisions by assuming the roles of active global citizens. This generation is necessary to create more just, tolerant, inclusive and sustainable societies. Nothing in this century is more impactful on an individual and collective level than education. Education and knowledge are potential change agents for national and global development. In this century, intellectual capital is the most significant currency to participate and succeed in knowledge economies. Relevant knowledge combined with social and economic inclusion can provide a competitive edge for the countries. Moreover, there is a need for new knowledge, skills and collaboration across the world economies to solve global problems and face the challenges of a fast-growing globalized world.

To address the needs of a highly competitive globalized knowledge economy, there is increasing demand in India and globally for quality education that develops competencies to take action for a better world. These competencies include intercultural understanding, interpersonal skills that help people make informed decisions, communication, critical thinking, creativity, leadership skills, knowledge of global challenges and developments and other 21st-century skills. These abilities are highly needed in the present-day job market and for sustainable development.

Many national governments have taken initiatives to reimagine the purpose and process of education. Singh (2005) contends that the changing imperatives of globalization necessitate ongoing reimagining and reworking of schooling. The recent major global crisis has highlighted the need for countries to shore up educational systems to make their economies resilient to global downturns. In India, several policies and programs are launched to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The new National Education Policy (2020) defines the purpose of the education system as to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. It aims to produce engaged, productive and contributing citizens to build an equitable, inclusive, and plural society as envisaged by our Constitution.

Many scholars have noted that the pace of change in most national education systems in moving towards the provision of an education that is in demand for the globalized knowledge economy is generally slow. In India, with minimal capacity and restricted resources in its education system, fundamental changes in school ethos, teaching-learning practices, and assessment practices are exponentially slow. Thus, throughout India, various educational actors/ sponsors are responding to the gaps in the system and modern-day demand from the higher socioeconomic groups for better quality education and a completely different teaching style. It is observed that private schools, especially international schools, are coming up in a big way to cater to the demands of the country's local middle class and elite groups.

At a global level, there has been a substantial increase in the number of international schools and the number of national schools offering international programs. In particular, the International Baccalaureate's (IB) programs for international education have been increasingly adopted by schools worldwide. According to the literature, the expansion of international schools may be due to the demands of the economic and labour market; this expansion in the changing demands of the global economy is seen as a 'free market response to a global need' (Pearce, 1994). Traditionally, the international schools catered to the children of diplomats and higher-class expatriate families, recently the local elite and middle-class families' demand for international education.

Before the turn of the century, the IB (International Baccalaureate) was only offered as an alternative curriculum in some developed English-speaking countries like the US, UK, Canada and Australia. In the last decade, the IB's presence has grown noticeably in private national

schools in developing and non-English speaking countries like Argentina, Mexico, Turkey and several Asian countries, most notably India, Hong Kong and Indonesia. In India, the number of schools with IB has witnessed a nearly ten-fold increase during the last ten years (Mukul, 2015). It is perceived that International Baccalaureate schools have the potential to provide an internationally recognized quality education that helps develop the intellectual, personal, emotional and social skills needed to live, learn and work in a rapidly globalizing world.

The exponential growth of international schools in India is a new phenomenon, precisely, the IB expansion. This study addresses pertinent questions related to contextualising the IB PYP curriculum and the schools' understanding and practising of IB PYP. The focus of this study was on IB PYP and its contextualization in Indian schools, as the IB, since its inception, has been one of the international curricula commonly adopted in both national private and international schools. Of all the IB programs in India, the PYP program is growing at a greater rate every year. Also, IB PYP stresses developing international mindedness through a transdisciplinary inquiry-based curriculum. It emphasizes that students should share an academic experience that would give impetus to critical thinking, intercultural understanding and exposure to various viewpoints (IBO, 2002). Thus, this context provides a fertile setting for the elucidation of contextualization of the IB PYP curriculum within the socio-cultural educational realities of modern India with its specific educational challenges and its own broader educational vision.

1.2 SCHOOL EDUCATION IN INDIA

In India, education is organized under a concurrent list in which the central and the State governments have joint responsibility for education, with the freedom given to the state governments to organize education within the national framework of education. The Ministry of Education (MoE) is responsible for educational policy planning and implementation, including the Department of School Education and Literacy and the Department of Higher Education. The National Council of Education Research and Training (NCERT) provides guidelines for the National Curriculum Framework for early years till class 12. This institution functions as a resource centre in school development and teacher education. Education is decentralized, and the State Councils of Educational Research and Training (SCERT) are established in every state, which is the principal research and development institution at the state level.

A uniform structure of school education, the 10+2 system is adopted by all the states and Union Territories of India following the National Policy on Education of 1986; with the new National Education Policy (2020), the structure of school education is now modified with a new pedagogical and curricular restructuring of 5+3+3+4 covering ages 3-18. With the constitutional amendment of making education a fundamental right, elementary school – classes 1 to 8 are recognized as the period of free and compulsory schooling. Since the independence, the Universalization of Elementary Education (UEE) has been the national priority of India. In this direction, policies and programs are implemented to increase educational access, enrolment and quality. In order to realize the goal of UEE, the government has been encouraging public-private partnerships in education. As a result, several private organizations have established private schools across the country. These private schools have the autonomy to choose any educational board. Education in private schools is not free; as an equity measure, the government has introduced a policy of providing 25% of seats in private schools for economically and socially disadvantaged groups to enable them to fulfil their educational needs and aspirations.

In India, 33 school boards offer and manage school curricula, including state, national and international boards (FICCI, 2014). At the national level, the most popular is the Central Board of Secondary Education (CBSE); CBSE suggests its affiliated schools follow the syllabi of NCERT. The medium of instruction prescribed by CBSE is English or Hindi. The board conducts two terminal-level examinations at the national level, one at the end of class 10 and the other at the end of class 12. With the demand for international education in the globalized world, it has initiated CBSE- International as a step towards internationalizing the national curriculum. Another board at the national level is the Council for the Indian School Certificate Examinations (CISCE) which is the umbrella for the Indian Certificate for Secondary Education (ICSE) and Indian School Certificate (ISC). The medium of instruction is English and conducts two terminal examinations at the national level. Many schools have affiliated with these national boards. At the state level, State Education Boards prescribe syllabus and conducts examination at the terminal stage of school education. In general, the medium of instruction is English or the state's regional language. Several private schools have adopted national or state curricula. The state-funded schools are mandated to follow the state board curriculum, and nationally-funded schools follow the CBSE curriculum.

Apart from the national and state education boards, a few international boards offer curricula for school education. The international boards that are operative in India are the International

Baccalaureate Organisation (IBO), International General Certificate of Secondary Education (IGCSE), Edexcel and Cambridge International Examination (CIE). In India, international schools are growing every year, and around 600 international schools are nationwide. In the last decade, it is observed that there has been an urge among private schools to transform their curricula and pedagogies to embrace the 'international' flavour seeking to provide the students with exposure to global culture and skills to work in the global market (Fuller & Narasimhan, 2006; Qureshi & Osella, 2013). The rise of international schools is a response to the demand from middle-class and upper-middle-class local parents who sees international education as a passport to gain intellectual and global capital that is much required for social mobility in the globalized knowledge economy.

India has witnessed an exponential growth of IB schools in the last decade, with nearly a ten-fold increase in IB schools (Mukul, 2015). In 2003, merely 11 schools were offering IB programs; in 2016, it went up to 129 schools, and now in 2022, the number is 205, and several schools are in the pipeline for IB authorization. Scholars have noted the potential of IB programs to satisfy the demands of the growing number of upwardly mobile Indian citizens and families by providing internationally recognized programs that help develop cognitive, emotional, and social skills needed to excel in the rapidly globalizing market.

1.3 INTERNATIONAL BACCALAUREATE ORGANIZATION (IBO)

The International Baccalaureate Organisation (IBO) is a non-profit international educational foundation headquartered in Geneva, Switzerland, founded in 1968. The mission of the IB is to develop inquiring, knowledgeable and caring young people who help create a better and more peaceful world through intercultural understanding and respect (IBO, 2009). IBO is perceived as one of the prominent providers of international education, and thus its international curricula are adopted by schools worldwide (Thompson, 1998). The IB has expanded exponentially over the decades, amounting to 5,500 schools in 160 countries (International Baccalaureate, 2022).

The founders of the IB emphasized that the IB was to complement national school systems and envisioned that the programs are specifically helpful for schools with culturally diverse student bodies (IBO, 1969 in Tarc, 2009) and schools as laboratories for pedagogical innovation (Peterson, 1972). The IB programs resulted from the collaborative work of motivated international educators with a vision that an academic experience emphasizing critical thinking and exposure to various viewpoints would foster tolerance and intercultural understanding

among young people. IB's core ideology promotes intercultural understanding by breaking down the barriers of ignorance and lack of cross-cultural contact. The IB program has been adopting progressive educational theories for lifelong learning. It has become a leader in international education, actively engaging students to become well-rounded, engaged global citizens. The IB provides a broad curriculum framework and supports schools in the implementation of three programs of international school education:

- Primary Years Programme (PYP) for students aged 3-12
- Middle Years Programme (MYP) for students aged 11-16
- Diploma Programme (DP) for students aged 16-19

IB programs are recognized worldwide, and the Association of Indian Universities (AIU) rates the IB Diploma at par with Class 12 CBSE, ICSE, NIOS or State Boards (International Baccalaureate, 2017). The IB programs are implemented both by the government and private schools abroad. In India, IB programs are implemented only by private schools. The schools must undergo an authorization process to implement any IB programs. The schools which wish to take up the IB program has to implement the program on a trial basis as candidate school according to the standards of the IB for three years, then invite the IB officials for a verification visit for its authorization. The IB has the autonomy to withdraw the authorization of the IB school if the school's performance is not on par with the standards of IB.

The first IB school in India was established in the year 1976 with the DP program and subsequently other two programs were introduced. IB schools are catching on exponentially in the recent past; several private schools across the country are affiliated with IBO, and among them, especially the PYP, has become more popular and has gained attention. A study by Pushpanadham (2013) reports that parents and students are optimistic about the IB PYP program. This study aims to extend the previous studies by exploring the contextualization of the PYP curriculum in India by investigating the curricular and pedagogical practices that entail implementing the PYP program.

1.4 INTERNATIONAL BACCALAUREATE PRIMARY YEARS PROGRAMME

International Baccalaureate Primary Years Programme (PYP) was started in 1997 and designed for students aged 3 to 12. It focuses on the development of the whole child as an inquirer, both in the classroom and in the world outside. In India, 124 schools are offering PYP. (International Baccalaureate, 2022). IB PYP aims to create internationally-minded people who can take action for the betterment of the world. Towards fulfilling this educational goal, PYP espouses

specific curricular, pedagogical and leadership approaches chosen from the growing knowledge base of education; they are discussed in the following section.

The social constructivist approach encapsulates the basic assumption about a child's learning in IB PYP. In this approach, social interaction and individual meaning construction play pivotal and crucial parts in the learning process (Ernest, 1994). IB PYP acknowledges the importance of early years experience for future learning and adopted curriculum and pedagogy based on the assumption that children are naturally curious and construct their knowledge.

Constructivism is widely discussed in the educational field with a central idea that learners construct their own knowledge upon the foundation of their previous knowledge. Pritchard (2009) defines constructivist learning as the process of mental construction whereby the individual adds new information to a pre-constructed understanding and knowledge. Constructivism is a learning theory, and various implications have been drawn to the nature and structure of curriculum, pedagogy, evaluation and learning environment in education. Confrey (1990) describes constructivism as a theory about the limits of human knowledge, a belief that all knowledge is necessarily a product of our cognitive acts". She argues that the world cannot be captured directly in the objectivist's sense and that an individual's understanding is constructed through their experiences. There are two significant strands of constructivism: a) Cognitive constructivism, as propagated by Jean Piaget (1972) b) Social constructivism, as propagated by Lev Vygotsky (1978).

Piaget's constructivism focuses on individual cognitive processes and social interactions. Although social aspects of classroom interactions are considered, the focus is more on the individual aspects of knowledge construction (Ernest, 1994). Piaget theorizes that the development of human intellect proceeds through adaptation and organization. Adaptation is a process of assimilation and accommodation, where, on the one hand, external events are assimilated into thoughts and, on the other, new and unusual mental structures are accommodated into the mental environment. He identifies knowledge with action and considers that mental development organizes these schemes in more complex and integrated ways to produce the adult mind (Piaget, 1972).

Vygotsky defines learning as "the creation of meaning that occurs when an individual links new knowledge with...existing knowledge" (Williams & Woods, 1997). In social constructivism, the priority is on the social and linguistic influences on learning and meaning-making. According to Vygotsky, social interaction through participation in several joint

activities and internalization of the influences of collective working provides learners with intellectual development and the acquisition of knowledge of the culture and the world if they are guided by a more skilled peer or adult (Rogoff, 1999); the interaction between children and their caregivers, for instance (Palincsar, 1998); acquisition of intellectual skills is regarded as an active process involving others (Jones, Brader-Araje, 2002; von Glasersfeld, 1989). Social constructivists also believe that social interactions in the process of knowing lead to higher levels of reasoning and learning (O'Connor, 1998). Finally, from the social constructivist point of view, culture and context have an essential role in understanding the learning process and constructing knowledge through this understanding.

In a social constructivist learning environment, the learners' beliefs on how the world works based on prior experience and learning are acknowledged. These beliefs, models or constructs are revisited and revised in light of new experiences. Learning happens in a cyclic path of constructing, testing, confirming, and repeating. Teachers play a role of a facilitator who ascertains students' prior knowledge and provides experiences through the curriculum and environment that give children opportunities to construct their knowledge. The teacher also scaffolds children for higher learning and helps to reach their maximum potential.

PYP believes that development and learning are interrelated. The transdisciplinary curriculum framework based on the social constructivist theory allows children for concept development that applies across and beyond subject-specific areas. The main aim of all the learning in PYP is to develop international-mindedness among the community of learners. The main features of PYP concerning curriculum and pedagogy are International Mindedness, Transdisciplinary curriculum and Inquiry-based pedagogy. In the present study, these features are investigated from practitioners' perspectives to describe the contextualization of the PYP curriculum in the Indian context.

1.4.1 International Mindedness

International mindedness (IM) is the critical concept underpinning all the IB programs and is central to its vision and mission, promoting intercultural understanding and respect. The IB recognizes that in the 21st century, children live in a globalized world, and young people with an IM disposition are advantaged. Students nurtured for international mindedness have broader cosmopolitan attributes, well-adjusted behaviour (Gardner-McTaggart, 2016), and a distinctive understanding of global developments and issues (Cause, 2009). Scholars note that IM is a desirable attribute that should be nurtured from the first entry to school (Skelton, 2013; Pelonis,

2014). IB offers a flexible definition of international mindedness due to the variety and complexity of IB schools. The construct – of international mindedness is related to intercultural understanding, global engagement and multilingualism and is identified as three pillars of IM (Singh & Qi, 2013).

IB's view of the internationally-minded individual recognizes common humanity and works towards a healthier and more peaceful world. The characteristics of internationally-minded learners are reflected in the ten attributes of the Learner Profile. The Learner Profile is central to the PYP definition of international-minded. The Learner Profile is value-laden and embodies what IB believes about international education. The IB learner profile is the IB mission statement translated into a set of learning outcomes in terms of ten attributes representing the kind of person the IB student should be. The learner profile is not meant to be "…. a profile of the perfect student; rather, it needs to be considered as a map of a lifelong journey in pursuit of international mindedness; the learner profile is a profile of a whole person as a lifelong learner" (IBO, 2009). In IB, the construct of international mindedness is described as a set of learning outcomes: the values and attributes mentioned in the Learner Profile. By developing and demonstrating these attributes, students are believed to learn to be internationally minded and can collaboratively solve complex problems in their globalized, interdependent world (IBO, 2009).

The attributes described in the Learner Profile are relevant to students across all age groups and are achievable by all primary years students. The ten attributes of the IB Learner Profile are (IBO, 2009).

- Inquirers: Students develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning, and this love of learning is sustained throughout their lives.
- Knowledgeable: Students explore concepts, ideas and issues that have local and global significance. They acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.
- Thinkers: Students exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned ethical decisions.

- Communicators: Students understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. 11 They work effectively and willingly in collaboration with others.
- Principled: Students act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.
- Open Minded: Students understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. Students are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.
- Caring: Students show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.
- Risk Takers: Students approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.
- Balanced: Students understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.
- Reflective: Students give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.

The teaching of values and skills is not exclusive to the IB. However, the IB learner profile provides IB schools with an explicit, unambiguous statement of IB beliefs and values- beliefs about the nature of international education and the values students need to develop to be productive, effective and to live a good life in the 21st century. The learner profile is a tool for holistic student development and whole-school reflection and analysis. The process of IM is considered a 'journey of learning rather than representing the profile of a perfect student. The Learner Profile is the map for a lifelong journey pursuing international-mindedness (Rizvi et al., 2014). The distinctive feature of LP is that it emphasizes the impact of social settings on individual learning (Lave & Wenger, 1991). Students absorb values, attributes, and ways of doing things through social interaction; moreover, in the international school context, the culturally diverse environment offers opportunities for developing understanding, attitudes and

values through modelling, reinforcement and social exchange. The IBLP attributes such as open-mindedness, caring, and communication promote IM.

As advocated by IB, the embracing model of international mindedness demands the school and teachers more than the straightforward curriculum and pedagogy. The schools need to organize the ethos, curricular and pedagogical activities that provide ample opportunities for students, teachers and parents to develop international mindedness creating a community of learners. Cause (2009) found that the school ethos and rituals are fundamental in securing the development of IM. Other scholars (Lave & Wenger, 1991) suggest that teachers and stakeholders must display the mindset and actions associated with global citizenship. Supporting this, Gardner-McTaggart (2016) noted that schools should aim for visible models of openness, sharing and communication, with staff working together to create learning environments that represent diversity and social capital of the wider world.

The empirical studies showed that despite the overarching vision and strong regulations of IB, each school has its way of interpreting and implementing IM through LP. This is because, each institution is moulded by its history, cultural diversity within the school, style of governance, and location, and influenced by the external factors of the dominant culture of the host state or nation. This is problematic when IB schools have legal obligations from a national curriculum. In addition, each student brings the school the underlying attitudes of their home; in some instances, these may support the IM or contradict it. Therefore, IM becomes a distinctive concept in each school setting, dependent on distinctive tensions and constraints (Tarc, 2009). The present study aims to capture how the practitioners organize curricular and pedagogical activities in the PYP to promote international mindedness through implementing the Learner Profile.

1.4.2 Transdisciplinary Curriculum

With the increase of globalization, the need for an integrated curriculum to prepare students for the 21st century is realized by scholars and practitioners. A transdisciplinary curriculum is considered under the broad umbrella of an integrated curriculum. An integrated curriculum is based on the premise of constructive approaches to learning that enhance student engagement. Moreover, scholars have highlighted the importance of integrating disciplines to understand complex problems, solve these problems and perceive the world we live in holistically. The integrated curriculum emphasizes connecting real-life situations with different disciplines, focusing on real-world context, needs, concerns, and social problems and participating in

meaningful activities (Beane, 1995; Jacobs, 1989, 1991; Vars, 1991). Boyer (1995) notes that forming interdisciplinary connections and discovering connecting paths is essential for students as it ensures students' learning through higher-level thinking and facilitates them in making connections with the self and the world (Erickson, 1994; Wall & Leckie, 2017). In an integrated curriculum, the themes are created by teachers and students based on individual and social concerns; student questioning is given the highest importance and learning is based on authentic experiences. In addition, an integrated curriculum helps students understand the applicability of the knowledge and skills in real life. Overall, the main emphasis of an integrated curriculum is understanding the world in a holistic sense with a focus on students' interests, curiosity and questions.

Hurley (2001) identified the multiple forms of an integrated curriculum that have emerged in the 21st century and noted that educators define integrated approaches in various ways, such as multidisciplinary, cross-disciplinary, intradisciplinary, fusion, interdisciplinary, and interdisciplinary transdisciplinary. These classifications explained below are related to the degree and extent to which disciplines are combined.

a) Multidisciplinary: This is a subject-centred approach where a central theme is identified and used to organize and correlate integrated disciplines (Brough, 2012; Dowden, 2007). The discipline integrity is preserved as learning activities are shaped around the subject area so that unique discipline-based connections are recognized. Also, the connections between the disciplines are low as there are separate teachings for each discipline (Choi & Pak, 2006; Drake, 2007).
b) Cross-disciplinary: In this approach, one discipline is viewed from the perspective of another discipline (Meeth, 1978). There is no balance between the disciplines in the cross-discipline model; hence, one discipline dominates. In this design, interdisciplinary communication decreases (UNESCO, 1986).
c) Interdisciplinary: In this approach, there is a more explicit connection between two or more disciplines, but the subjects are still relatively straightforward in their differences. The organization of learning activities is not around a subject theme but an interdisciplinary key concept, skills, attitudes and actions. Here the disciplinary skills and knowledge integration to explain a familiar concept, skill or action. To some extent, the borders of the disciplines are blurred, and mutual interactions are high (Berger, 1970; Choi & Pak, 2006; Drake, 2007; Park & Son, 2010)

d) Transdisciplinary: In this approach, the disciplines work together in examining real-life problems. The learning goes across and beyond the disciplinary boundaries; the borders of the disciplines are blurred, and disciplines cannot be distinguished. In this approach, instead of teacher-generated questions, students' questions take the focus and learning is organized around those questions. (Choi & Pak, 2006; Drake, 2007; Meeth, 1978; Rosenfield, 1992).

The International Baccalaureate Primary Years Programme (IB PYP) adopts a transdisciplinary curriculum for primary education which conveys that learning is authentic and relevant across subject areas and transcends the confines of subject areas to connect to the real world" (IBO, 2012). A transdisciplinary approach is a relatively young approach. The word itself was first used in 1970 by Jean Piaget. Transdisciplinary teaching became evident in the late 90s. Wiesmann et al. (2008) argue that transdisciplinary teaching, learning and research have emerged as a response to the complex problems in 21st-century society. It is found that disciplinary approaches to these complex problems are insufficient and that only looking beyond the disciplines can help understand the problems and solutions that may be determined. Nicolescu (1998) posits that transdisciplinary teaching and learning is not just an intellectual activity but involves the entire person: mind, body and emotions. He also asserts that peace and transdisciplinary have indisputable relations. On these lines, UNESCO also emphasizes the transdisciplinary approach in education for sustainable development and peace in the world (UNESCO, 2015).

A transdisciplinary approach refers to learning that is authentic and relevant to the real world. Transdisciplinary approaches move beyond blending disciplines and link concepts and skills through the real world. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge. Transdisciplinary teaching frames a big idea as an overarching theme for the inquiry process (Bertea, 2005). The transdisciplinary approach involves the organization of curriculum and instruction around authentic student questions and global issues where concepts and skills are developed through real-world context. Inquiry is at the heart of the transdisciplinary approach as students seek answers to the questions raised by the curriculum and themselves. Finding answers to their questions and connecting to global issues and real-world problems are highly motivating for students and relevant to their learning. By engaging in this kind of learning, students shift from rote learning to meaningful learning, essentially learning how to effectively apply what they already know and how to find out what they do not know.

The PYP is grounded in a solid transdisciplinary framework based on the work of Ernest Boyer (1995) and others. The holistic framework emphasizes the whole child and authentic and significant inquiry (IBO, 2009). The importance of the disciplines is acknowledged, but disciplines alone are not enough. Students need to learn the concepts and skills that transcend the disciplines and fall into the transdisciplinary realm. The IB recognizes six transdisciplinary themes which are based on human commonalities and are of global significance. Each Transdisciplinary Theme encompasses a vast knowledge of universal understandings common to humanity. Various concepts and skills from different traditional subjects are integrated into these themes based on human commonalities. The work of Boyer (1995) has been seminal to the development of the PYP. He proposed that students explore themes that represent shared human experiences. He referred to these as "core commonalities". The PYP is designed through six transdisciplinary themes with global significance- for all students in all cultures, offering students opportunities to explore the commonalities of human experience. The six transdisciplinary themes are (IBO, 2009)

- Who we are
- Where are we in place and time
- How we express ourselves
- How the world works
- How we organize ourselves
- Sharing the planet

The transdisciplinary themes are deeply investigated through different questions and explorations throughout the students learning journey. When effectively using this approach, teachers do not compartmentalize learning but rather explore content within the context of inquiry. Beane (1995) states that an integrated curriculum is not simply an organizational tool related to changes in the curriculum. Instead, it is a new way of thinking about the role of schools, teachers, and the content and context of the curriculum. In the transdisciplinary teaching-learning process, teachers assume the role of facilitator. In this approach, the students take the role of creating knowledge, and the teacher has the role of ensuring interactive learning (Park & Son, 2010). Teachers are expected to integrate topics/themes determined with students; the effectiveness of transdisciplinary learning is affected by the synergy between teachers and students (Wall & Leckie, 2017). In PYP, teachers are expected to constantly develop, assess and transform a transdisciplinary curriculum into an inquiry-based teaching plan. In PYP,

teachers are required to have generic skills such as interpersonal and process skills and specific expertise in curriculum design and pedagogic knowledge (as cited in Huizinga, Handelzalts, Nieveen & Voogt, 2014). Undoubtedly, the PYP transdisciplinary curriculum is challenging to implement and demands excellent competency from the teachers and leaders. The study explores the interpretation and implementation of the transdisciplinary curriculum as perceived and practised by PYP practitioners.

1.4.3 Inquiry-Based Teaching-Learning: Pedagogical Approaches in PYP

Learning is the core of any educational institution; in this regard, curriculum and pedagogy play a seminal role in making learning meaningful and relevant for the students by providing a conducive environment in and beyond the classroom. Pedagogy directly impacts the students learning, and thus the teachers and the principals need to understand the depth and breadth of pedagogy to facilitate meaningful learning. From the descriptions of the pedagogy experts, pedagogy not only focuses on the students learning but also contributes to the broader community. Pedagogical approaches are based on the knowledge of how children learn and what is more appropriate to be learnt in a broader socioeconomic and political context. Pedagogy is dynamic and invites theory to inform it. Thus, pedagogical practices are seen variedly from behaviourism to constructivism with the evolution of new theories of learning and evolving social dimensions of learning. The most emphasized theory of learning is constructivism, which has ample evidence in research and practice regarding increased students' engagement, learning and creativity. The educational institutions that believe in this theory adopt pedagogical practices which help the children construct their knowledge by providing a democratic, reflective learning environment through collaborating with others and considering the socioeconomic, cultural and political aspects of teaching-learning.

The pedagogical approaches in IB are based on constructivism, which is widely used and accepted that asserts that knowledge is not passively learned but actively built and refers to approaches that recognize the importance of engaging and challenging existing mental models in learners to improve understanding performance. The IB posits the guided inquiry, which is based on Vygotsky's zone of proximal development, where a facilitator leads a student from a place of successful independent learning through varied learning experiences to another level, and the student must expand upon his or her learning (Skirrow, 2009). This is also asserted by Wells (1999), who considers that there should be an inquiry 'orientation' in the curriculum and that the teacher needs to create the environment for this orientation.

The early description of inquiry learning can be traced back to the times of Socrates when he used questioning methods with his students. Later in the early 20th century, John Dewey focused on inquiry for learning and emphasized the importance of students questioning and learning process; he says that questioning is just the beginning of fruitful learning, though undoubtedly humans have used inquiry and questioning in the learning process throughout history. Dewey (1910) asserts that thinking does not just "spontaneously combust"; it originates with some event which implies that a conducive environment needs to be provided in the educational organization. Aulls and Shore (2008) opine that definitions for inquiry learning vary widely depending on the subject, discipline, and grade level. The concept of inquiry has assumed various definitions over time. Inquiry is viewed as questioning, dialogue - teacher-directed questioning to student-generated questioning. It is also viewed as a teaching approach and a learning outcome.

In IB PYP, inquiry is both an approach and a learning outcome. The students investigate the transdisciplinary themes through structured, purposeful inquiry, action and reflection on learning various subjects (Science, Mathematics, Social Science, Language etc.), concepts, skills and attitudes, with more emphasis given on student-generated inquiry. Transdisciplinarity, thematic approach and inquiry go hand in hand in the teaching-learning process. Further, the IB PYP curriculum seeks to develop 'communities of inquiry (Davidson & Carber, 2009) where students generate ideas and learn to share where the class develops a repertoire of ways of talking. The IB believes that learning best occurs when teachers and students construct knowledge/ generation of ideas instead of a teacher-led learning environment based on knowledge transmission. In inquiry learning, conceptual development happens in various formats, such as individually, in groups or whole-class discussions (Davidson & Carber, 2009). The teacher plays the role of the facilitator and helps the students to develop the skill of questioning, giving evidence, drawing conclusions and taking action. IB suggests teachers to choose from a variety of inquiry cycles that suit the needs of their students. The IB PYP, grounded in these approaches, expects the school to create a conducive environment to work under the PYP curricular and pedagogical framework.

The IB PYP is a challenging program, and the schools are responsible for aligning its curricular and pedagogical practices to that of IB to promote international mindedness in the community of learners. The study aimed to understand how the international curriculum with educational ideology to promote international mindedness is adopted in a national context like India, which

has its own educational goals, realities and challenges; specifically, the study seeks to understand this process by investigating the interpretation and implementation of curricular and pedagogical approaches mandated by IB. In implementing the PYP program, the schools need to create a conducive environment and structures to perform a host of activities for curriculum development, implementation and evaluation to meet the standards of IB. In order to study several interrelated concepts and processes, the researcher developed a conceptual framework for curriculum management. The following section details the conceptual framework laid out for the study.

1.5 CONCEPTUAL FRAMEWORK

The study of curriculum management in PYP involves the in-depth investigation of various curricular and pedagogical activities in the schools. The stakeholders need to develop their curriculum, implement, and evaluate, meeting the IB standards and the local expectations. It was clear from the previous section that the PYP curriculum has numerous components that require a clear understanding of curriculum development, implementation, evaluation and leadership from a conceptual and theoretical perspective. The researcher developed this conceptual framework through a thorough review of the literature on various curriculum management components, which set the research's direction.

1.5.1 Curriculum Management

In order to understand curriculum management, first, it is essential to understand and define curriculum and management for the present context. Curriculum has no universal definition, and it is said that curriculum is never static nor immutable but is constantly evolving. Thus, it is crucial to define curriculum in the present context. Some of the definitions given by pioneers of curriculum are given below.

Curriculum is the totality of experiences a child experiences in school. It consists of that series of things children and youth must do, aid experience by developing the ability to do things well that make up the affairs of adult life (Bobbit, 1924). This view is supported by Tyler (1957), who adds that curriculum is a planned framework that emerges out of theory and research or professional practices. They both express the view that curriculum is all the child's experiences in the school, both intentional and unintentional. Other experts like Taba (1962), Saylor & Alexander (1974) and Tanner & Tanner (1995) view curriculum as all the learning of students, which is planned by and directed by the school to attain its educational goals. They also

emphasize the intended learning outcomes of the students, which is the product of the curriculum.

The present study defines curriculum as knowledge, skills, concepts, processes, attitudes and values to be taught and learned at the appropriate levels. The main components of the school curriculum considered for the study are written curriculum, taught curriculum and assessed curriculum. All these components are interconnected and interrelated and are explained below.

- Written Curriculum: Written curriculum is the written document developed by the school which contains the vision, mission, goals, specific objectives and standards that are to be achieved by the teachers and students
- Taught Curriculum: The taught curriculum sets out the pedagogical approach. It is the curriculum that the teacher delivers.
- Assessed Curriculum: The assessed curriculum is the knowledge, skills, attitudes, and values formatively and summative assessed. The assessed curriculum explains how teachers gather and analyse student performance information.

The generic components of the curriculum include five components

1. The vision and institutional, educational goals and objectives of the specific academic program
2. The objectives of the academic programs
3. Time frame or duration of the educational program
4. Planned learning experiences
5. Pedagogical approaches

In order to successfully implement any educational program at a school level, the curriculum needs to be well managed to get the best learning outcomes. The term management is used in various ways in the educational context. Management is defined as working with and through individuals, groups, and other resources to accomplish organized goals (Pretorius, 1998). Others define management as an activity involving responsibility for getting things done through others (Ross, Taylor). Educational management is defined as a distinct process consisting of planning, organizing, actuating and controlling, performed to determine and accomplish stated objectives using human beings and other resources (Terry). By considering the above definitions of curriculum and management, we can now refer to Curriculum management as the process of working with teachers, and students, in groups and other

resources for curriculum development, curriculum implementation and evaluation to align the components of the curriculum.

The purpose of curriculum management is to ensure that all students get the most out of the education provided by institutions. In a broader sense, curriculum management aims to develop knowledge, skills, attitudes, and values among all learners who can contribute meaningfully to the overall well-being of humankind and the planet. Curriculum management is not a mere development and delivery of the curriculum; it involves various interrelated components ranging from setting educational goals to developing content to transaction and evaluation. Curriculum management is a process of ensuring the written, taught, and assessed curricula are aligned and gathering information for evaluating the effectiveness of the curriculum. Curriculum management focuses on relevance, consistency, practicality, effectiveness, reiterative process and sustainability and whether learners are achieving the expected learning outcomes.

The schools offering IB programs are expected to perform various curricular, pedagogical and managerial functions, including planning, organizing, staffing, directing and controlling to implement the IB programs effectively. For the present study, Curriculum management is conceptualized as a reiterative process of curriculum development, implementation and evaluation. Pedagogical leadership in the school ensures the effectiveness of curriculum management.

1.5.1.1 Curriculum Development

The curriculum is developed on various levels; the two significant levels are the national/ societal level and other at the institutional level. In the present study, the curriculum developed at the institutional level is investigated, and significant components are illuminated to evolve with a model for curriculum development in IB PYP schools.

Curriculum development is one of the primary functions of the IB school as each school needs to develop its curriculum (written, taught and assessed curriculum) based on the guidelines provided by the IB. Experts in the field regard the PYP curriculum as a shelf curriculum (Bagnall, 2008; Cambridge & Thompson, 2004). A shelf curriculum provides a curriculum framework but not the content. It is more concerned with the method of teaching than the content.

Curriculum development is defined as a planned, purposeful, progressive, and systematic process to develop a framework that guides all the teaching-learning activities in the school to create positive improvements in students. Curriculum development is a complex but systematic process that focuses on planning the content to be delivered and the pedagogical approaches and assessment techniques to be used during the teaching-learning process. Curriculum development has a broad scope because it is not only about the school, the learners, and the teacher; it is also about society's general development. Alvior (2014) asserts this and views curriculum development as a critical component in economic growth in the knowledge society as it provides adequate knowledge, skills and values among the students. The curriculum developed needs to respond to national and global developments. Curriculum development not just helps the teachers by setting directions for teaching-learning at the micro level but also sets the direction for the whole school organization at the macro level. The principals and teachers are the major stakeholders in the curriculum development process. The prerequisite for curriculum development is clarity in the purpose of the curriculum to be developed. IB schools must understand the IB philosophy and national priorities of education while developing the curriculum to make the curriculum meaningful and relevant for students both in the national and global context.

The main elements of curriculum development are goals and objectives, content or subject matter, methods or learning experience and evaluation methods. During the curriculum development process, the following areas need to be considered: the social aspirations of the society, three domains of learning- cognitive, psychomotor and affective, the individual differences of students, levels of learning (taxonomy), the body of knowledge, skills, values that are essential in the society (Tyler, 1950). Along the same lines, Wiles & Bondi (2007) have identified five areas as foundations of the curriculum; they are

- Social factors in society
- Treatment of knowledge
- Human growth and development
- Learning as a process
- Technology

The curriculum developers need to take care of all these factors and develop a curriculum relevant to the learner and society.

Factors Influencing Curriculum Development.

- *Philosophy of education in specific primary school education*- In the history of education, we have witnessed various philosophies driving the education system and curriculum. Many philosophers, educators, educational institutions, and national leaders have put forward their ideologies on education's purpose, process and product. Recently, we have witnessed many international organizations promoting education for international mindedness, cutting across different nations and cultures—one such organization is IBO. The educational philosophies advocated by IB are a key influencing factor in curriculum development in IB schools in India.

- *Educational Psychology*: This provides the background for the principles of teaching-learning. Learning is a dynamic process where myriad factors affect the learning process and learning outcomes. Several learning theories provide a basis for understanding how students learn in a particular context and have implications for the curriculum. In the study context, the IB PYP is based on the constructivist learning theory and the curriculum is weaved to facilitate knowledge construction. In addition, educational psychology provides an understanding of individual differences of learners, learning styles, and approaches which provide a basis for content selection and learning experiences that cater to the needs of all learners.

- *Societal factors*: It is well established that education and society closely impact each other. Society has expectations of the education system, especially regarding its aims and objectives in preparing children who can contribute to society. Many researchers have established that the social background of students and the socialization process impact their learning outcomes. Thus, understanding learners in the social context, the societal expectations, and understanding how learners socialize and can bring social change are essential aspects considered during curriculum development.

- *Political factors:* Politics affect curriculum development at various local, regional, national and international levels. Although the schools and the curriculum are primarily considered in the national domain, with globalization, some international players influence the education, thus, curriculum within the national context. The policies and funding are the product of political activity at the national level; thus, any schools operating in a national context are affected by the politics and policies. In the study's context, national educational policies affect curriculum development at the school level.

- *Technological factors*: With the advent of technology in the 21st century in all realms of life, it has significantly influenced curriculum. Recently, we have witnessed how technology-supported teaching-learning is embedded in the education systems. The curriculum, which was predominantly based on teaching-learning in a physical setting, is altered by the use of technologies which has invited national and international educators to reimagine the curriculum in a technology-driven world.

The curriculum developers must consider all these factors while developing a school-based curriculum in PYP.

Principles of Curriculum Development.

From the literature on curriculum development, general principles of curriculum development are identified and discussed below.

- *Principle of child-centeredness*: The learners are at the centre of the education system. The curriculum needs to cater to the needs of all learners. The curriculum needs to be age-appropriate and relevant to learners from various socioeconomic backgrounds, based on the different levels of students' abilities and interests. This principle focuses on developing a curriculum based on the learner's context, needs and attributes.
- *Principle of community-centeredness*: One of the main aims of education is to prepare young children to contribute to society in a meaningful way. The curriculum needs to facilitate the socialization process of children and build the knowledge, skills and attitudes to participate in society actively.
- *Principle of activity-centeredness*: There is a significant amount of evidence on how activity-based and play method facilitates increased student engagement and learning outcomes. Through activities, learners connect the knowledge and skills learnt to real life. At the primary level, activity-based learning fosters self-regulation and collaboration. Thus, activity-centeredness is vital in the curriculum development process for primary education.
- *Principle of variety:* The principle of variety focuses on the breadth of experiences provided in the curriculum; this includes a wide range of subject areas relevant to various cultures and different social backgrounds of students. This principle stresses developing curriculum for students in different socio-cultural contexts and with different learning styles, abilities and interests.

- *Principle of co-relation*: The integration and co-relation of different learning experiences are essential for students' holistic learning. The principle of co-relation is imperative in developing a curriculum where all the curricular components, subject areas, and learning experiences are integrated and related to achieving the aims of education or a particular academic program.
- *Principle of conservation*: One of the goals of education is to preserve and transmit cultural heritage and conserve the environment. The curriculum developers need to be cognizant of cultural politics and ensure that the culture of minorities and marginalized communities is preserved, aiming for cultural integration and intercultural understanding. This principle presses on curriculum, which facilitates the learner to identify himself/ herself as a part of the wider environment and their role in the protection, conservation and development of the environment.
- *Principle of comprehensiveness*: This principle addresses the fact that learning is not confined to the four walls of the classroom but is ubiquitous. This identifies formal, informal and non-formal learning; learning within the classroom, school and outside the school. This principle combines written, taught, assessed, hidden, and intended curricula to create a valuable and relevant learning experience for students.
- *Principle of creativity*: Creativity is one of the critical attributes of a 21st-century learner. In the complex world, we require people who can think creatively and come up with solutions for complex world problems. This principle gives impetus to designing a learning experience that stimulates and nurtures the creativity in each learner. The element of creativity needs to be embedded in every stage of students learning.
- *Principle of flexibility*: The purpose and process of education change with the changing times and demands of the present and the future world. Thus, the curriculum needs to be flexible and modified based on society's new demands, new research on learners and learning theories. With this principle in place, the education system can respond well within time to the rapidly changing world.
- *Principle of utility*: The curriculum should be designed to prepare the students for the present and the future. The learning experiences the subjects learnt need to have utilitarian value rather than rhetoric. Every generation has a set of subjects and skill sets necessary to contribute meaningfully to society. The curriculum developers need to identify and integrate those areas within the curriculum.

- *Principle of forward-looking*: The curriculum needs to prepare students for the present life and the future. The curriculum must enable the learners to lead successful lives after graduating. This principle highlights the importance of the futuristic aims of education. It stresses that the curriculum developers should foresee society's knowledge, skill and attitude requirement and prepare the students accordingly through a well-designed curriculum.

The general principles of curriculum development need to follow along with specific principles emerging from the PYP framework. It is well established that a sound curriculum is crucial to attaining the institution's educational goals. It was observed from the literature review that there are various models for curriculum development based on the different ideologies to develop a robust curriculum which is meaningful and relevant for students. In the next section, different curriculum models are described.

Models of Curriculum Development.

In the literature, there are two major approaches to curriculum development: the technical/ scientific approach and the non-technical/non-scientific approach. It must be noted that each approach has its strengths based on the institution's intent. The advocates of the scientific models believe that systematic procedures will facilitate curriculum creation. Under the technical/ scientific approach to curriculum development, three major models are discussed.

Tyler Model: Tyler defines four basic components of the curriculum

- Purpose of the school
- Educational experience based on the purposes
- Organization of educational experiences
- Evaluation of curriculum in terms of attainment of the purposes

In Tyler's model, the purpose of the school is derived from three main sources- society, learners and subject matter. Based on the purposes, tentative objectives are to be formed. The next step is to translate the general objectives into specific learning objectives. Once the learning objectives are formed, the learning experience and subject matter are selected and organized. The evaluation component is a feedback system to check if the purpose of the school, that is, the aims and goals of the school, is achieved or not.

Taba Model: Taba emphasizes the bottom-up approach to curriculum development and advocates that the teachers- who are users of the curriculum must develop the curriculum.

Adopting an inductive approach, Taba specifies that teachers must first outline the learners' needs and move towards creating a general design. There are seven key steps in the grassroots model of curriculum development in which teachers are the leading players in providing the inputs.

- Diagnosis of needs
- Formulation of objectives
- Selection of content
- Organization of content
- Selection of learning experiences
- Organization of learning experiences
- Evaluation

This model giving impetus to teachers' involvement in developing the curriculum, assumes that teachers are trained and competent to develop the curriculum.

Saylor and Alexander Model: This model adopts an administrative approach to curriculum development. The model consists of four steps.

- Formulating goals and objective
- Curriculum design
- Curriculum implementation
- Curriculum evaluation

The goals and objectives are formulated considering various factors- societal factors, national policies, learning theories, learners and knowledge base. In the second step, the curriculum developers analyze the goals and objectives to create a curriculum design. In the next step, the curriculum is implemented in a small sample, similar to the pilot study. In this step, decisions are taken on instructional and student assessment strategies. The last step involves the evaluation of both expected learning outcomes and the entire curriculum design.

These technical models outline specific steps and procedures to arrive at the desired curriculum. In the non-technical approach, the impetus is given to students' perception of their needs, interests and preferences. This contrasts with previous approaches that rely heavily on the perspectives of experts and the demands of the subject matter.

The open classroom model: In this model, the starting point for curriculum development is identifying students' interests, needs and aptitudes. The diagnosis of needs in this approach is not based on the teacher's assessment but on students' perspectives. Students play a central role in deciding what needs to be included in the curriculum. This curriculum model is based on an activity curriculum where activities are both the means and end of the learning journey. This model stresses learning by doing and promotes a high degree of student agency and autonomy where students actively take ownership of their learning.

Weinstein and Fantini's model: This model works on the principle of flexibility and learner-centeredness. In this model, the teacher assesses the relevance of the existing curriculum and generates new content and strategies based n the needs and preferences of students. Keeping students at the centre of learning, the teachers shape a new curriculum that caters to the needs and interests of the students in a particular group/ grade. This model gives greater flexibility based on each student group's needs and interests. The general steps to develop a curriculum using this model are

- Identifying the target group
- Selection and organization of content. The content is selected based on the students' concerns, needs and interests. The content can be gathered from various sources, such as experiences of a growing person; students' feelings about his/her own experiences- the experiences can range from self-conception, about friends, academic subjects and any life experiences and from students' knowledge of his/her social-cultural environment.
- Selection of skills- Based on the content, the relevant skills are identified to be instilled among students.
- Selection of teaching strategies- Teaching strategies complement students' skills and knowledge development based on their needs, concerns and interests.

The above section helped the researcher to delineate various factors influencing curriculum development and principles of curriculum development. The study of existing models helped the researcher understand various components within curriculum development and their interrelations with each other. The literature provided a solid foundation to study curriculum development in PYP and evolve with empirical curricular models.

The IB PYP schools need to produce a written document called a Program of Inquiry (POI), which serves as the school's written curriculum. This written curriculum is the product of the

curriculum development process. The POI is a written document comprising the six transdisciplinary themes running horizontally and the age groups running vertically. It creates a trans-disciplinary framework that allows students to "step up" beyond the confines of learning within subject areas. Each unit in the inquiry program consists of a central idea, key concepts, related concepts, and lines of inquiry. The IB PYP curriculum includes five essential elements which need to be included in the POI. They are (IBO, 2009)

1. Knowledge, which is both disciplinary and transdisciplinary. Disciplinary knowledge is represented by traditional subject areas (language, math, science, social studies, arts, Personal, social and Physical Education)
2. Concepts
3. Skills
4. Attitudes
5. Action

All these elements need to be incorporated into the POI so that students are given an opportunity to

- Develop disciplinary and transdisciplinary knowledge
- Understand concepts which help them to make connections throughout the learning
- Develop skills which are essential for the 21st century
- Develop attitudes which lead to international mindedness
- Take responsible action as a consequence of their learning

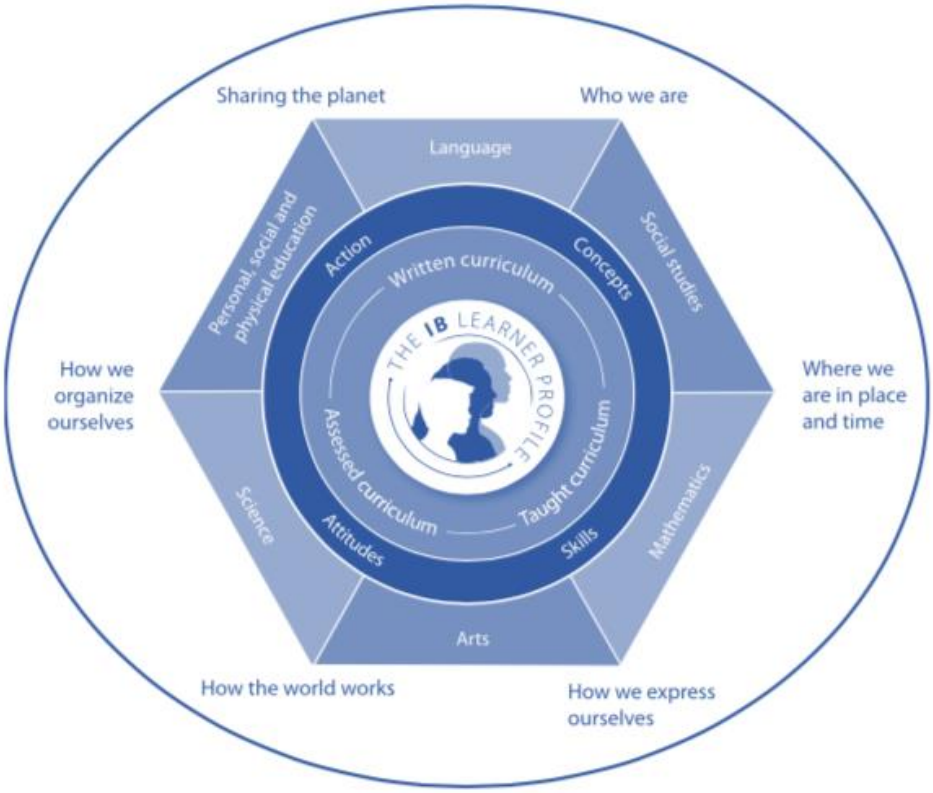
The guidelines provided by IB for developing the POI are as follows. (IBO, 2009)

- Ensuring all the five elements are interwoven according to the age and development of the students in the six transdisciplinary themes.
- Ensuring the content developed is relevant and significant to the students.
- Addressing the local needs of the community and inclusion of the study of the home country, the culture of individual students and the culture of others, including their belief systems.
- Providing opportunities for reflection on human commonality, diversity and multiple perspectives.
- Providing opportunities for developing ten learner profile attributes.

Figure 1.0 represents the transdisciplinary curriculum framework which includes written, taught and assessed curriculum and the six transdisciplinary themes, which include the five elements of PYP: Knowledge (six subjects), concepts, skills, attitudes and action. It is seen that the IB guidelines have included the foundations of curriculum development and also have provided the scope for the schools to include local and national educational priorities.

Figure 1.0

Transdisciplinary curriculum framework of IB PYP (IBO, 2009)



Curriculum development is a value-laden process in which leaders choose from many possibilities (Wiles & Bondi, 2007). The principals in IB schools need to exercise effective leadership in developing the transdisciplinary curriculum most relevant to the students based on the school's philosophy, the framework of IB and local and national priorities. There are no prescribed textbooks from IB, and the schools have the autonomy to choose the reference books and supplementary books to facilitate the transdisciplinary teaching learning as planned in POI.

The present study aimed to identify the key factors influencing curriculum development and outline the procedures for developing a school-based curriculum based on the IB guidelines to evolve a curriculum development model for IB PYP.

1.5.1.2 Curriculum Implementation

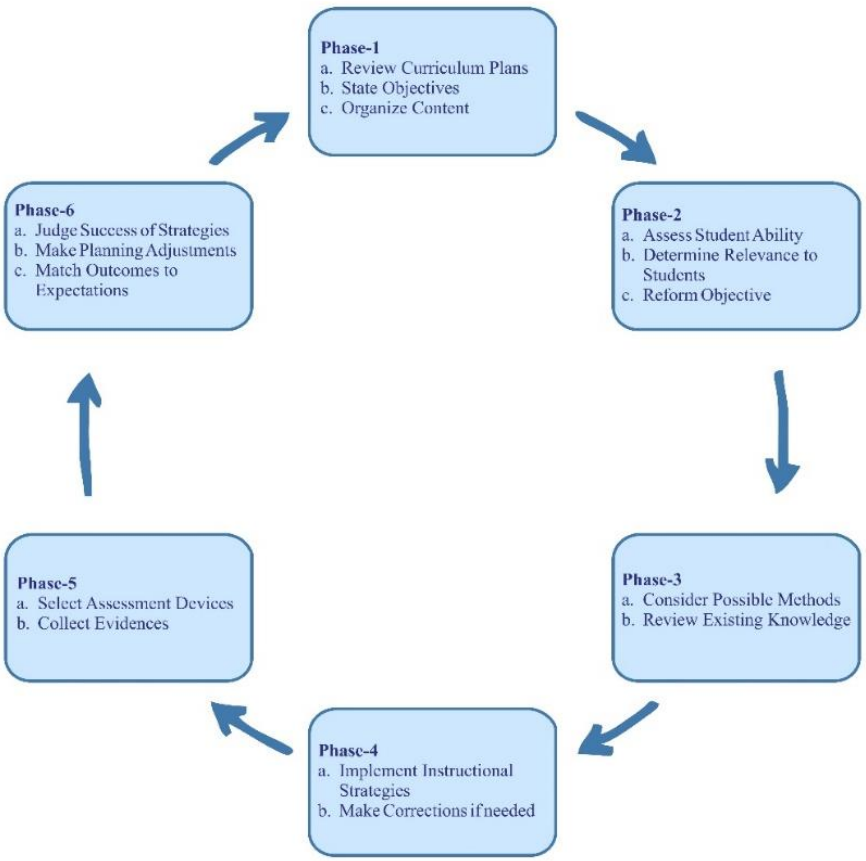
Curriculum implementation is of utmost importance as the students who are the beneficiaries of the curriculum are directly involved. Curriculum implementation focuses on the processes and practices through which a curriculum is implemented, and the implemented curriculum constitutes the school's taught curriculum. As Thomas (2012) described, the curriculum implementation task involves putting into practice the stipulated curriculum policies, content and innovations. Curriculum implementation occurs when the teacher-constructed syllabus, the teacher's personality, the teaching materials and the environment interact with the learner (University of Zimbabwe, 1995). It is defined by Nnadozie (2004) as the execution of relevant curriculum and teaching tasks within and outside the school setting. The learners are at the centre of curriculum implementation, and the implementation process involves facilitating the learner to acquire knowledge, skills and experiences. Several factors influence the implementation, such as resources, facilities, teachers, the school environment, culture, ideology, instructional practices, and assessment practices.

Planning Curriculum Implementation.

Curriculum implementation is a tedious process that requires meticulous planning and competencies to deliver the curriculum and fulfil the educational institution's mission. Wiles & Bondi (2007) provide an instructional planning cycle, which provides a framework to effectively plan and implement the curriculum. The cycle (figure 1.1) has six phases which begin with the review of the objectives and end with judging the instructional strategy and making modifications further. This cycle helps the teachers plan relevant pedagogical strategies to make the learning meaningful.

Figure 1.1

Instructional Planning Cycle (Wiles, J., & Bondi, J, 2007).



Planning for curriculum implementation addresses the needs and changes necessary and the required resources for effectively implementing the intended curriculum. Three components need to be considered in the planning process: People, Programs and Processes. These three components are inseparable when it comes to curriculum implementation. In order to successfully implement the curriculum, the teachers, curriculum developers, educationists, and school leaders need to be aligned with the aims and objectives of the educational program and pedagogical approaches. Some scholars argue that the primary focus should be on implementing the curriculum and that the people will adapt to it. However, this has its downside. Since teachers are the main actors in the curriculum implementation, their commitment and alignment with the curriculum are fundamental. Thus, in order to effectively plan and implement the curriculum in a school, there has to be cooperation and coherence established between people, programs and processes.

In PYP, the teachers are the curriculum implementors, and they review the written curriculum (POI) and plan and implement the curriculum. In the present study, the curriculum

implementation is studied in terms of classroom practices and the context, culture and resources that support the classroom practices. The classroom practices in PYP are learner-centric and are committed to a structured, purposeful inquiry that engages students actively in their learning. This is the taught curriculum of the PYP, which sets out the pedagogical approaches to support students' knowledge construction by,

- drawing on their prior knowledge
- providing provocation through new experiences
- Provide opportunities for reflection and consolidation.

Key Components of Curriculum Implementation.

a. *Context*: The context of the school has a substantial impact on the teaching-learning process. Understanding the school context is essential to strategically implement the curriculum as it significantly impacts students' learning. The school context can be categorized into two aspects one is the visible aspects and the other is the invisible aspects. The visible aspects include the physical classrooms and the school's location- the city, state, and country. The geographical location of the school influences teaching-learning, as a different location has different learner backgrounds. Along with this, the type of school in terms of the funding also impacts curriculum as it affects the resources, class sizes, teacher recruitment, retention and infrastructural facilities.

The invisible or non-tangible aspects of context include classroom cultures- group dynamics, institutional culture, local expectations of/ attitudes to education, national educational culture, and socio-political belief systems. These non-tangible aspects vary from place to place; the educational culture in terms of how people understand and what people expect of education can vary from one place to another place (Zeng in Wedell, 2009). For instance, in India, parents usually expect their children to learn specific things at school and show it to them, and they would expect standardized assessments and home works to be given. Otherwise, they would question the teaching quality of teachers and the school. The nation's educational policies and socio-political belief systems also contribute to the educational context, thus shaping the curriculum implementation at the school level. In order to fully understand the curriculum implementation, one needs to acknowledge the contextual differences within the IB schools in different regions and national contexts. The present study explores the contextual factors and differences and their impact on PYP curriculum implementation.

b. Culture: The classroom and institutional culture impact the teaching-learning process. The schools and teachers need to constantly create conducive learning culture to nurture a community of learners. Each school creates a culture based on its ideology and philosophy of education, and repeated practices lead to the establishment of a certain kind of culture. Research shows that a robust curriculum combined with strong school cultures leads to sustained academic excellence. The core elements of school culture include shared beliefs and values, behavioural expectations and norms and tangible manifestation of these norms and values. A strong culture is created with sound leadership that upholds cohesion, values, communication, collaboration and ownership. Although there are challenges in measuring the culture within the school system, it is possible to capture distinctive cultures through qualitative approaches. In this line, the study explored the learning culture prevailing in PYP that impacted curriculum implementation.

c. Resources: Resources- material and human resources play an essential role in curriculum implementation. The schools must ensure adequate resources are available and accessible to all the stakeholders to implement the written curriculum. The utility of resources needs to be constantly ensured by teachers, co-ordinators and principals. Regarding material resources, the schools need to provide spacious classrooms, laboratories, workshops, libraries and sports fields to create an environment for holistic learning. Time is one of the crucial resources to be well managed during curriculum implementation. The leadership needs to allocate the required time for all the curricular and pedagogical activities within the school. In PYP, the schools need to decide how the PYP curriculum needs to be organized in terms of content and time allocation. Timetabling should be done that facilitates inquiry-based teaching-learning. The understanding of learners- their needs and interest also inform the timetabling. Time allocation needs to be done not only concerning teaching-learning within the classroom but also outside the classroom. Also, it is vital to allocate specific time for teacher collaboration.

Human resources play a vital role in curriculum implementation. An effective staffing process must be in place to ensure human resources are utilized to the highest potential. The human resources directly impacting teaching-learning include the principal, PYP co-ordinator, teachers, specialists and support teachers. The schools must ensure that the human resources are prepared and well-managed for effective curriculum implementation. Parents are also valuable human resources and must be encouraged to participate in the curriculum implementation process. Community resources should be utilized for teaching learning. This helps the student to relate the learning to real life and helps them take action in their community.

d. Classroom practices: The curriculum implementation concerning classroom practices involve vital components. They are teachers in the role of facilitators, Students as active learners, and Taught curriculum and classroom environment. The assessment practices are included in the student assessment section in the curriculum evaluation component of curriculum management.

- Teacher's role as a facilitator refers to the environment that the teacher creates to facilitate learning by motivating the learners, supporting them with learning resources wherever required, and developing rapport with the students by sharing and respecting the learner's autonomy reinforcing the self-initiation of the learner. Kelly (1977) identifies teachers as sole translators of curriculum, and Simon & Tzur (1999) define teachers' practice as "... not only everything that teachers do that contributes to their teaching (planning, assessing, interacting with student) but also everything teachers think about, know and believe about what they do". Bingler (2000) agrees with this and states that the learning environments provided by teachers are critical aspects of the school. Thus, schools need to ensure the effectiveness of teachers' activities.
- Learner's role: Learners' role refers to the various behaviours exhibited by the learner during the learning process. The various behaviours include accepting challenges, taking the initiative, making decisions, using feedback, preparing learning resources, asking questions and searching for answers, exploring new information and controlling the classroom activities in a group or individually. The learner's proactiveness determines the learning outcomes achieved by the learner. Individual ability, interest, and home background determine students' engagement in the learning process. In inquiry, students are expected to actively construct their knowledge, in contrast to the traditional learner's role as a passive receiver of information.
- Taught curriculum: This refers to the communication of ideas/knowledge/concepts or knowledge exchange between teachers and students. The taught curriculum includes the specific content that is taught within the classroom.
- Classroom environment: The classroom environment encompasses a broad range of areas, including the physical setting, the psychological environment created through social contexts, and numerous pedagogical components related to teacher characteristics and behaviours. Classroom climate and interpersonal teacher behaviours can significantly impact student learning (Goh & Fraser, 1996). The physical classroom arrangements should provide a favourable environment for inquiry-based learning. This

requires planning of spaces within the classroom which includes the arrangement of furniture, visual displays, availability of technology, and learning materials that cater to the needs of all the learners. The spaces in the classroom need to provide diverse learning experiences, and this can be achieved by creating learning or interest corners within the classroom. The teacher must create a conducive classroom learning culture along with the physical environment. This can be done by establishing rules and regulations and regular routines that foster the spirit of inquiry among students.

In IB PYP, teachers plan their classroom practices using PYP planners. PYP planner is a guiding document with a set of questions through which teachers plan and reflect on the content delivered, pedagogical approaches and assessment techniques used in the classroom. The teachers are solely responsible for planning the transdisciplinary teaching and learning using the PYP Planners based on the School's Program of Inquiry (POI).

The presentation aimed to investigate the context, culture, and available resources and their effects on curriculum implementation in PYP. Classroom practices as one of the major components of curriculum implementation were studied, and various interrelated components were identified to evolve with a generic model for curriculum implementation in IB PYP.

1.5.1.3 Curriculum Evaluation

Curriculum evaluation in the educational scenario is the least practised but most important. Curriculum evaluation came into practice due to the public's insistence on educational accountability, the experts' demands for educational reform, and the educators' need for evidence of results (Talla, 2012). The schools are always in pursuit of improving the overall quality and standard of the curriculum. This is not possible by mere opinions and discussions among the stakeholders; there needs to be a systematic, strategic plan put into action to gather the evidence and make relevant interpretations and suggestions for further improvement. Moreover, the whole process of curriculum often goes with many assumptions and half-tested hypotheses. Thus, curriculum evaluation is necessary to determine the efficacy and effectiveness of the whole school curriculum. In many cases, the curricular innovations are based on the feedback obtained from the curriculum evaluation process.

Curriculum evaluation has a narrow meaning and a broad meaning. Narrowly, curriculum evaluation culminates into either scores or grades on the performance. Talla (2012) notes that in a conventional education system, these practices are seen where the only concern is the display of marks and grades. Scriven's (1972) definition of curriculum evaluation is the

assessment of the merit and worth of planned learning experiences for a given group of learners in a given discipline or area of study in a stipulated period. In the same context, Gatawa (1990) provides the meaning of curriculum evaluation as follows:

- The process of describing and judging an educational programme or subject.
- The process of comparing a student's performance with behaviorally stated objectives.
- The defining, obtaining and using relevant information for decision-making purposes.

Most of the time, the school's focus is on student evaluation. It is equally important to evaluate whether the curriculum, learning experiences, and pedagogical practices are relevant to the target group and whether it is achieving the educational goals. In a broader connotation, evaluation goes beyond individual performance level, looks forward in absolute terms, and compares against absolute standards. According to Harlen (1971), curriculum evaluation includes student assessment and the school's assessment of their planned activities, teaching strategies and assessment techniques. In short, curriculum evaluation is the school investigating whether the planned courses, activities, teaching strategies and assessment techniques produced the desired results. For the present study, the curriculum evaluation consists of two components- one is the student assessment, and the other is evaluating the school curriculum.

Student Assessment.

The student assessment is an integral part of teaching-learning that provides an understanding of whether the curriculum's aims and objectives are fulfilled. The assessed curriculum deals with the assessment of actual learning in each student. A range of assessment strategies helps the teachers understand the learning outcome, learners and their learning journey; this further helps the teachers modify the curriculum based on the students' needs and attributes.

Criteria for Effective Assessments (IBO, 2009)

IB provides several criteria that apply to both summative and formative assessments. Assessments should allow students to

- share their learning and understanding with others
- demonstrate a range of knowledge, conceptual understanding and skills
- use a variety of learning styles, multiple intelligences and abilities to express their understanding

- know and understand in advance the criteria for producing a quality product or performance
- participate in reflection, self- and peer-assessment
- base their learning on real-life experiences that can lead to further inquiries
- express different points of view and interpretations
- analyze their learning and understand what needs to be improved

Components of Student Assessments

In PYP assessment component is divided into three related areas – Assessing, Recording and Reporting.

a. Assessing is related to the understanding of what students have learned. A systematic assessment that includes summative and formative assessment provides data on students' knowledge, skills, attitudes and conceptual understanding. Assessments are used for several purposes and in different phases of learning. Based on the purpose and timing of the assessment, two types of assessments can be identified- Summative and formative assessment

The summative assessment generally takes place after the learning is completed. This type of assessment is a culmination of the teaching-learning process. It gives students opportunities to demonstrate the knowledge, skills and competencies they have learned in a particular program within a specific timeframe. Summative assessment involves the assessment of several elements simultaneously. The teachers decide what areas to be assessed in the summative assessment. Typically, these assessments aim to measure the key concepts and skills required for the students to achieve by the end of the program.

Formative assessments are carried out during the instructional process for various purposes. One of the primary purposes of formative assessment is to understand students' progress and use this information to plan the next stage of learning. This assessment aims to provide constant and regular feedback to students on their learning. This helps learners improve their knowledge, motivates them to perform, fosters enthusiasm, and engages in reflection. Research has shown that formative assessments are beneficial for students with learning difficulties.

b. Recording is related to collecting and analyzing data on students' learning. Assessment strategies and tools form a basis for systematically recording students' learning. The teachers need to decide which strategy and tool to use to get the desired information about student learning. Teachers can choose from various assessment strategies and tools; some essential strategies are – observations, performance assessments, process-focused assessments, selected

responses, and open-ended tasks. Based on the objective of the assessment, the teachers choose one or more strategies. The popular assessment tools are rubrics, exemplars, checklists, anecdotal records, achievement tests, and continuums. It has to be noted that IB does not administer any standardized test and has given the flexibility to the schools to administer tests based on the school and local requirements.

Both teachers and students systematically document the recorded data. In IB, portfolios are used to document student learning.

c. Reporting is related to communicating information about student learning to various stakeholders. Reporting provides opportunities for teachers to give feedback to students. This feedback system helps the students and parents understand their children's progress. The IB provides criteria for effective reporting (IBO, 2009)

- involve parents, students and teachers as partners
- reflect what the school community values
- be comprehensive, honest, fair and credible
- be clear and understandable to all parties
- allow teachers to incorporate what they learn during the reporting process into their future teaching and assessment practice.

IB encourages schools to organize student-led, teacher-student, and teacher-parent conferences to demonstrate and discuss student learning. Written reports are prepared by the teachers who are the summative record for students, parents and school of a student's progress.

Evaluating School Curriculum.

The school needs to have a set of criteria and predetermined methods for curriculum evaluation. Hilda Taba in Talla (2012) suggests specific curriculum evaluation criteria.

- Consistency with the objectives
- Comprehensiveness
- Sufficient diagnostic value
- Validity
- Unity of evaluative judgment
- Continuity

There are various methods for curriculum evaluation. It depends on the way the data is collected, analyzed and interpreted and which perspective is used as a basis for evaluation and

decision-making. Lee Cronbach in Talla (2012) has identified the two approaches- the scientific approach and the humanistic approach and asserts that these are on the two extremes of the continuum.

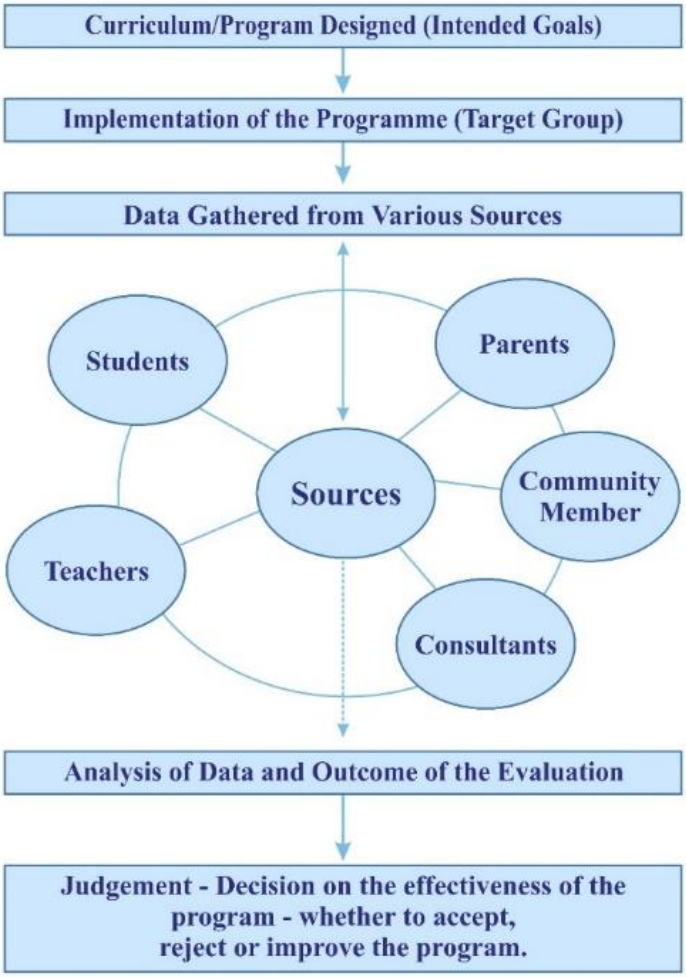
a) Scientific approach: In this approach, empirical/ experimental evidence is sought. The same instruments and methods are used to assess the achievement of all the categories of students. Factual, quantitative data is collected and analyzed statistically. Then on this basis, the decisions are taken.

b) Humanistic approach: Qualitative analysis is considered for evaluation in this case study. Information is collected in a naturalistic setting, and data is collected from various sources to get a thick description of reality. Here the final result is not given maximum importance.

Evaluation of the curriculum is done in various stages with a different purposes. Evaluation is done before curriculum development, during and after curriculum development (before curriculum implementation) to check the continuity and relevance of the developed curriculum. Evaluation is also done during curriculum implementation, including the evaluation of teachers' pedagogical practices and formative assessment of students. During this stage, the evidence is gathered to analyze and decide on the curriculum. Evaluation is done after implementation based on the data gathered during implementation and summative assessments of students. The major actors involved are the principal, co-ordinator, teachers and students. Parents are also considered for evaluation purposes. The below flow diagram explains the process of curriculum evaluation. The curriculum evaluation explained below (figure 1.2) describes the evaluation done after the curriculum development.

Figure 1.2

Curriculum Evaluation Process (Talla, M, 2012).



In IB PYP, curriculum evaluation is done as a part of program evaluation. The Programme evaluation is a monitoring process through which IB ensures the standards of PYP schools. The evaluation takes place in three areas: Philosophy, Curriculum and Organization. The steps involved in IB program evaluation are:

a) Planning the self-study: Self-study is a self-evaluation process that the IB schools undergo to improve the program. The self-study will take at least 12 months. All the stakeholders need to be involved in this process. In this phase, the schools plan the schedule for the self-study.
b) Self-study: The self-study is conducted through a self-study questionnaire provided by the IB to the school. Schools evaluate their perceived level of implementation using 4-point Likert scales in the area of philosophy, organization and curriculum. Along with this, the school produces evidence for the school's self-rating.

c) Submission of self-study questionnaire: The questionnaire is submitted to the concerned IB office with supporting documents.
d) IB Evaluation visit: The IB officials visit the school to verify the school's assessment of its program implementation.

The present study investigated the student assessment and curriculum evaluation process in PYP and identified vital components and practices adopted by the schools for practical curriculum evaluation.

1.5.1.4 Pedagogical Leadership

The concept of pedagogical leadership came into being with the basic assumption that in an educational organization, leadership should be reflected by pedagogy as pedagogy is the core activity and the purpose. The principals and teachers within the educational organizations need to subscribe to pedagogy, and hence they need to assume pedagogic leaders' roles to improve student learning. The literature on pedagogical leadership is limited, and has different interpretations and focuses in an educational context. Thus it is necessary to understand and define pedagogical leadership in the present study context.

Pedagogical leadership, unlike instructional leadership, recognizes a child's cultural, moral, and societal aspects and emphasizes what, why and how of a student's learning. Instructional leadership narrowly focuses on students' grades but fails to acknowledge the social and cultural aspects of learning. In this line, van Manen (1991) notes that it is possible to learn all the instruction techniques but remain pedagogically unfit as a teacher. Pedagogical leadership is based on dialogue, not monologue and the learners are essential participants in the discussion and decision-making. It also recognizes the professional primacy of the stakeholders and connotes active and reflective learning and professional, consultative decision-making at the classroom and school levels. The pedagogic leaders need to create a democratic, reflective, collaborative environment where learning is contextualized to the learner's social, cultural, and political environment.

Pedagogical leadership focuses mainly on the quality of students learning. Students' learning is predicated on the formal and informal teachers' practice, reflection, and capacity of the principals, co-ordinators and teachers to exercise leadership. MacNeill & Cavanagh (2007) provides a comparison between instructional and pedagogic leadership

Table 1.0

Comparison between instructional and pedagogical leadership

Instructional Leadership	**Pedagogic Leadership**
Focus on teacher instruction	Focus on students' learning
Driven by mandated curriculum	Determined by needs and interests of students
Test results seen as a goal	Test results seen as one aspect of learning and informative of level of student understanding of concepts explored
Predicated on teaching as a craft	Predicated on teaching as a profession
Hierarchical in nature	Distributed leadership
More about school management	More about building professional learning community
Principal as an instructor of teachers	Principal as a leaders of teacher professional learning
Pragmatic in nature	Moral and facilitative in nature

Conceptual Background on Pedagogical Leadership.

In the literature, pedagogical leadership has received various interpretations and perspectives. Based on the previous work, four significant perspectives of pedagogical leadership can be delineated. The first perspective views pedagogical leadership as learner-centred leadership that promotes the development of teachers and students. Teachers and students are at the centre of teaching-learning activity; the improvement or transformation in pedagogy is only possible with the development of teachers and students. In a practical context, researchers have stated that pedagogical leadership is a blend of teacher supervision, professional development, and curriculum development that aims for enhanced learning (Their & Aarnitukia, 1994). Pedagogical leadership requires leaders to respect teachers as intellectuals and acknowledge the complexity of the interplay between theory and practice. Here the development of three components is in focus – teachers, students and the curriculum, which will lead to the development of human capital in the school (Sergiovanni, 1998). Further, pedagogical leadership is identified as a mutually transformative learning relationship that improves teachers' and principals' pedagogical practices, which results in improved student engagement and learning (MacNeill & Cavanagh, 2007).

The second perspective views leadership's focus primarily on pedagogical practices. Pedagogical leadership shifts away focus from outcomes and outputs to the process and development of pedagogical courses of action that are relevant and meaningful to all learners from different contexts. Heikka's study (2014) highlighted pedagogical leadership as involving a comprehensive set of stakeholders to improve pedagogical practices within the school. Similarly, Andrews (2009) noted that pedagogical leadership is concerned with informing and leading pedagogical practices.

The third perspective of pedagogical leadership emphasizes the principals' role, pedagogical competency and professional development. Many scholars perceive that principals as pedagogic leaders need to exert direct influence on pedagogical practices by demonstrating competency in pedagogical practices. For instance, Wortham (2006) pointed out that "pedagogical leadership is about the principal's presence in classrooms and pedagogic credibility". In the same vein, Bottoms (2003) promoted a theory which suggests educational leaders must have an understanding and working knowledge of research-based curriculum and pedagogy, pedagogical practices for more significant school learning, and providing teachers with opportunities for growth and development". In short, pedagogical leadership stresses principals/ school leaders taking direct responsibility and involvement in curriculum and pedagogy to improve the quality of learning in the school.

The fourth perspective recognizes the influence of community on students learning; thus, pedagogical leadership is viewed as a collaborative process among teachers, learners, and the community to achieve improved learning outcomes. Pedagogical leadership considers the relationships among the learner, learning, learner's identity and community ecology, thus promoting community partnership to enhance students learning. Pedagogic leaders hold the responsibility for community development through meaningful collaborations and partnerships.

It was observed that various factors influence pedagogical leadership in the school context. Fonsen (2013) identifies four dimensions that influence pedagogical leadership: context, organisational culture, directors' professionalism and substance management. Context is the primary determinant of leadership. It is seen that the micro and the macro context affect leadership. At the micro level, the structure of the organisation and the priorities of core tasks either hinder or promote pedagogical leadership. At the macro level, educational ideologies, priorities and policies impact the enactment of pedagogical leadership. The second dimension

is related to an organisational culture concerned with the interactions, group dynamics and distributed leadership within the school system. As Sergiovanni (2001) advocates, leadership in the school community should be built around values and virtues to develop social capital in the whole community. In doing so, the leadership needs to be distributed among various stakeholders. This indicates that the distribution of leadership positively affects pedagogical leadership, promoting improved student learning. The third dimension is related to the professionalism of pedagogic leaders; in a school context, it is the principal. The principals need to have leadership skills to lead the curriculum and pedagogical practices in the school. They are responsible for the organisation's functionality and need to set the vision and direction, develop students, provide teachers' professional development, and build community partnerships. The fourth aspect is the principal's pedagogical competence. Typically, principals are oriented towards administrative and economic tasks, and pedagogical leadership focuses on the pedagogical knowledge and skills of principals where they need to actively engage in developing and sustaining pedagogical practices in the school.

In a nutshell, pedagogical leadership is not limited to students learning and the professional development of teachers but also extends to creating learning communities by interacting with the local community and the larger global community. Thus, the pedagogic leaders need to create a democratic and collaborative environment where interaction with the community is promoted by involving all the stakeholders to facilitate holistic learning among students and community development.

For the present study, pedagogical leadership is defined as an enabling process by exercising leadership for designing curricular activities, practising effective pedagogy, promoting professional collaboration, and creating learning communities by providing a democratic and reflective learning environment. The definition suggests that pedagogic leaders need to work in synergy with the learners, teachers, management and other community members with a shared vision to achieve the vision and mission of the school. IB PYP promotes distributed leadership as an effective model for sustained leadership. The following section describes distributed leadership as an approach of pedagogical leadership to support holistic learning.

Distributed Leadership: An Approach of Pedagogical Leadership.

Hargreaves (Hargreaves & Fink, 2005) claims sustainable leadership is best supported by distributed leadership model where deeper and broader pools of leadership talent are developed within the school. Heikka (2014) has identified five dimensions of distributed pedagogic

leadership. 1) Enhancing shared consciousness of visions and strategies between the stakeholders 2) Distributing responsibilities for pedagogical leadership 3) Distributing and clarifying power relationships between the stakeholders 4) Distributing the enactment of pedagogical improvement within the organization 5) Developing strategy for distributed pedagogical leadership. The importance of distributed leadership has been established by many researchers and has improved the school's overall performance. With the increase in the complexity of schools, the distributed leadership approach positively impacts students learning and the overall development of the school. Distributed leadership promotes teacher leadership where teachers take leadership initiative and actively involve in curricular and pedagogical activities, including decision-making. Teacher involvement is crucial as they are the ones who have practical knowledge and skills in curriculum implementation and pedagogical practices.

Spillane (2006) indicated that distributed leadership is not about sharing responsibilities and delegating duties to others but involves various stakeholders and spreads the leadership functions over the entire social context of the school. Since schools are becoming complex and curriculum demands are increasing, principals need to involve teachers as experts in instruction to improve teaching-learning (Vlachadi & Ferla, 2013). In addition to recognising the expertise of teachers, principals need to understand the differences in the level and type of expertise within their school to align the skills and knowledge of staff members with the vision and goals of the schools. As school tasks require different skill sets and knowledge bases which does not reside in one individual, it is essential to involve individuals at different levels in various leadership tasks (Larsen & Rieckhoff, 2014). In distributed leadership, principals utilize the expertise of others and provide leadership roles; this does not imply that principals become less relevant. Harris (2012) notes that in distributed leadership, the principal is responsible for recognising that there are others in the school with diverse expertise and are capable of taking on various leadership roles, while principals are engaged in a sole leadership position for some tasks and functions.

Liljenberg's (2015) study showed that engagement in distributed leadership practice freed up principals' time to focus on meeting the individual needs of the staff and thus enhanced the development of leadership capacity in teachers and teaching learning. Distributed leadership is the means to foster and utilise the expertise of different faculty to influence the school positively. The key to distributed leadership is empowering more individuals in the school to take on decision-making responsibilities. Cherkowski and Brown (2013) noted that distributed leadership is successful when the leadership practices are purposefully structured and aligned

with a school's shared visions and goals. There are several benefits of distributed leadership; even though teachers and mid-level leaders are benefited from the practice of distributed leadership, Grenda and Hackmann (2014) indicated challenges faced by formal and informal leaders sharing leadership in schools. Thus, the positive outcomes of distributed leadership in schools depend on understanding the challenges of engaging in distributed leadership in a different educational setting (Liljenberg, 2015).

The IB proposes a leadership team where the principals and teachers must take up pedagogic leaders' roles. The nature of leadership in IB PYP is distributed in which the leadership is not solely on the principal but also given to teachers so that he/ she feels ownership when he goes to the happen site. The pedagogic leadership team comprises the principal, PYP co-ordinator and teachers.

a) Role of Principals: The principal in the IB school is the leader of the pedagogical leadership team and the visionary of the school. In order to support the community of learners, the school leaders need to be fully informed about the PYP, and they should be mindful of the ways to motivate, challenge and empower teachers to accept and perform leadership roles. Donmoyer & Wagstaff (1990) emphasize that principals influence teaching and learning and school culture, intentionally or not. Squelch and Lemmer (1994) confirms that the performance of the school, its staff and its learners are deeply affected by the principal's leadership. The principals play a crucial role in effective curriculum management. Morphet, Johns and Reller (1982) note that principals typically regard curriculum management as their primary function and one on which they would like to spend a large amount of their time. In IB schools, principals as pedagogic leaders need to lead all the processes in curriculum management, i.e. curriculum development, implementation and evaluation, to ensure alignment and quality. They need to initiate innovative pedagogic practices and encourage collaborative and reflective practices by creating a democratic learning environment in the school. They need to provide opportunities for professional collaboration of teachers to improve their learning, which affects students learning. They also need to constantly dialogue with all the stakeholders to promote community learning and development. The other members of the pedagogical leadership team are PYP co-ordinators and teachers.

b) Role of PYP co-ordinators: PYP co-ordinator is a designation given to a teacher who can lead the teachers in planning, implementing and evaluating the PYP curriculum. The PYP co-ordinator acts as a bridge between the principal and teachers and between IB officials and teachers. The PYP coordinator has to ensure that the teachers understand the PYP curriculum and standards of IB. The IB suggests that qualified and competent teachers need to be recruited for the PYP program. Schools set their qualification criteria to recruit teachers. The teachers are expected to be flexible, adaptive and competent to implement the PYP program. The PYP teachers, as pedagogic leaders, need to see themselves as facilitators of learning, observers, co-learners alongside educators and researchers. The teachers need to be involved in all the phases of curriculum management as they are the ones who bridge the gap between curriculum theory and curriculum practice. The teachers, by exercising leadership, need to create a democratic learning environment, encourage collaborative learning and promote reflective practices among students. In order to support school leaders and teachers in understanding the PYP program, IB offers a wide range of professional development programs throughout the year. The schools are responsible for sponsoring the school leaders and teachers for these professional development programs conducted by the IB.

Pedagogical leadership plays a key role in curriculum management in IB PYP. Thus, the present study investigated the pedagogical leadership in PYP schools. Several components of pedagogical leadership were identified, and their interrelation was established to evolve a generic model for pedagogical leadership.

The conceptual framework helped the researcher to understand the nuances of the IB PYP program. It provided an understanding of key components of curriculum management-curriculum development, curriculum implementation, curriculum evaluation and pedagogical leadership and interrelated components. The robust conceptual framework aided the development of relevant research tools and further facilitated the plausible interpretations of the findings.

1.6 RATIONALE OF THE STUDY

IB expansion in India is an emblematic story of educational globalization. The global actors (international education programs) interact with the national context and actors to create new practices/ institutional forms that alter the existing educational structures and practices. According to the literature, the increase in international education is a response to the growing economic and labour market. According to Cambridge and Thompson (2004), globalized international education serves a market that requires the global certification of educational qualifications, which facilitates educational continuity for the children of host country families with aspirations toward social and global mobility. Many parents believe that IB programs offer a robust curriculum that develops students' cultural literacy (MacKenzie, 2010) and competencies to compete in a global market (Hayden, 2011).

Consequently, the number of international and national schools adopting international curricula is growing at an unprecedented rate. The IBO is the most popular and reputed organization providing international educational programs at the school level across the world. Initially, IB provided an internationally transferable school qualification for expatriate, globally mobile families (Resnik, 2009), in the last few decades, the IB has grown exponentially worldwide and is offered in around 5000 schools in more than 150 countries (IBO, 2018). There is a tenfold increase in the number of IB schools in India, with PYP being the most popular program offered by private schools.

The increase of international schools in India, especially the IB, is a new phenomenon. In a context where the government is struggling to provide quality education for all, private unaided schools are proliferating at an increased rate, accounting for 40% of the enrolment of students (DISE, 2015). Private education in India plays a significant role in meeting the skill demand of the Indian and global economies. IB education is in high demand by parents as they perceive that IB education prepares the students with relevant skills, knowledge and attitudes to excel in the global economy (Pushpanadham, 2013). With its significant presence in policy and curricular reform at the global level, IBO has influences beyond the immediate stakeholders, for example, the potential replacement of the Australian Certificate of Education with the IB diploma (Doherty, 2009). The literature suggests that policymakers, national governments and foundations consider IB as a tool for raising educational outcomes and developing skills and attributes necessary in the 21st century (Rizvi et al., 2014). For instance, the US Department of Education and the Gates Foundation have invested millions of dollars in supporting low-income students' access and capacity to be successful with the IB (Perna et al., 2015). Another

example is the Ecuadorian Ministry of Education's press to increase public high schools that offer IB programs to enhance the pedagogical rigour and quality (Barnett, 2013). The expansion of IB in India certainly impacts the educational hierarchy, accessibility, structure, policy, practices and many other unknown areas. This study responds to this as it aims to illuminate the various curricular and pedagogical practices that define the contextualization of the IB PYP curriculum in India.

IB aims to provide a holistic education that cultivates students' academic and personal development with the impetus given to intercultural understanding, international mindedness and engaged citizenship both locally and globally. The mission statement of IB is - The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect (IBO, 2018). To this end, the IBO works with schools to develop and implement engaging programs for international education. The IB expects its authorized schools to set explicit goals to promote global citizenship, international mindedness and intercultural understanding through discussing global-local issues and studying different languages and cultures. Kauffman's (2005) research suggests that the inclusion of intercultural education in IBPYP schools is variable. Belal (2017) & Lineham (2013) found that students (in the DP program) perceived that becoming international-minded had less to do with the DP program and more to do with engaging in an internationally diverse school community.

Further, Hayden and Thompson (1995) suggest that not all international schooling, including the IB programs, necessarily or automatically become international in orientation. Explicit teaching about international mindedness may likely be more effective in a culturally diverse setting. Reflecting on the IB schools in the Indian context, the demographics have increasingly become local students from higher socio-economic families and local teachers with a less internationally diverse population. The educational aims pronounced in NEP 2020 stress developing strong national identities with global mindedness among young learners. The IB school context makes an interesting case to explore how the schools organize their curricular and pedagogical activities to promote international mindedness while reinforcing national identities in their school community.

It is assumed that IB schools are ideologically driven, with a commitment to intercultural, global citizenship education with quality curriculum and pedagogy as the top priority. However, according to Richard's (1998) assessment, many schools attempt to articulate a

philosophy grounded in international education ideals but remain market-driven. A study conducted on IB schools in India noted that most schools are private unaided schools, and IB programs are utilized to provide choice and market differentiation (Guy, 2010). There is no government body in India to regulate/ monitor international schools (Quality Council of India, 2009). Thus, several aspects related to education aims and priorities, curricular and pedagogical practices, social inclusion, and model for education in international schools are undiscovered.

IB programs are known for their curricular and pedagogic rigour, and many researchers believe that IBO provides the best of all post-modern educational practices for teaching learning (Dunning, 2002; Freeman, 1987; Gehring, 2001; Kuikman, 2002). With academic rigour coupled with intercultural skills, and value components, IB programs are seen as a 'golden standard' of education (Bunnell, 2015), and this is perceived as a solution to the narrow 'back to basics approach that has become popular in many schools with the rise of standardized testing regimes (Dickson, Perry, & Ledger, 2017). IB PYP has a positive reputation for its holistic and transdisciplinary teaching, concept-driven, inquiry-based pedagogical frameworks that develop students' knowledge, skills, values, and attitudes (Ledger, 2017). Educational reformers note that transdisciplinary curricula and constructivist pedagogical frameworks facilitate students to learn the knowledge, skills and attitudes to navigate the complex global world (Hargreaves & Fullan, 2012; Hargreaves & Shirley, 2009).

The studies conducted in PYP across the globe have shown that teachers valued and enacted transdisciplinary teaching and pedagogical principles of IB (Stillisano et al., 2011; Twigg, 2010; Savage & Drake, 2016). Some qualitative studies have found that not all IB teachers employ a student-centred, inquiry-based approach; they suggested that teachers' nationality might be one of the factors related to their instructional style (Pendergast, Dole & Rentoule, 2014). For instance, in a study conducted in Turkey, the IB DP teachers reported that they struggled with IB's student-centric approach as it differed from the teacher-centric, didactic approach common in their country (Martin, Tanyu & Perry, 2016).

Several scholars and educators have noted the pivotal role of teachers in the success of IB programs. Lochmiller, Lucero, & Lester (2016) found that the change in the mindset of teachers is of utmost importance to adopting curricular and pedagogical principles of IB. Emphasizing the crucial role of teachers in IB schools, George Walker, a former IB Director General, stated, "without the right teachers, the whole lot comes crashing down (Walker, 2002). With the expansion of IB PYP schools in India, it is imperative to understand how the practitioners

interpret and practice transdisciplinary, inquiry-based PYP curricula in a context where teachers are associated with traditional educational practices dominant in the national system.

IB PYP, with its progressive educational principles and practices, has made considerable strides in its development across the world over the last two decades. Through its robust programs and commitment to intercultural education, the IB holds enormous potential for preparing students for the complex world who can contribute to a peaceful and sustainable world. This, however, may only be accomplished through the effective implementation of the IB programs at the schools. IB PYP program is a rigorous and challenging program for both students and schools. PYP curriculum is described mainly as a pedagogical framework that allows the school/ teachers to structure its curriculum relevant to their school community. The review of previous studies has uncovered several challenges in implementing IB programs globally. They are related to aligning the aims and approaches of IB programs with the national curricular standards or assessment, teachers' competencies to engage effectively in student-centric pedagogic practices, stakeholder expectations and cultural values about education and its purpose and roles. In India, it was found that the lack of teacher awareness and competencies to teach the PYP curriculum and professional development were significant constraints for implementing the PYP program (Pushpanadham, 2013). It is the sole responsibility of the schools to create conducive conditions, structures, and processes that can sustain in order to implement the PYP curriculum effectively. This requires sustained investment and faculty commitment toward the IB PYP's educational philosophy and principles.

Research on international education in India is still emerging; not surprisingly, there has been very little research focused on IB PYP in the Indian context. The literature review identified only one study that specifically investigated PYP (Pushpanadham, 2013). This study provided a profile of PYP schools in India describing the characteristics of the school administration, teachers, and students. It further identified the issues and challenges from various stakeholders' perspectives in implementing PYP. The study also revealed that IB schools situated in different geographical locations, though following the same curriculum, varied efficiency and performance due to the pedagogical leadership and teacher professional development. Two other studies on IB in India were identified; Guy (2010) investigated the reasons that schools in India are adopting IB and the benefits that the programs are perceived to offer in educational terms to their constituents; Mutha's (2021) ethnographic study explored the culture of teaching-learning in IB schools in Pune city. Considering the rapid growth of IB PYP schools in India and previous research highlighting how the IB influences educational practices, it was thus

crucial to investigate how the IB PYP curriculum is contextualized in the schools within the broader socio-cultural-political and educational realities of India. As such, this study explicitly explored how the practitioners (across a broader sample of PYP schools) interpreted the PYP curriculum and how the schools managed the curriculum by investigating the curriculum development, implementation, evaluation and pedagogical leadership in PYP schools.

The present study adds to the literature base related to PYP and, more general, education in modern-day emerging India. While there is a growing body of evidence on the curricular and pedagogical processes and outcomes of IB programs, the PYP is still an emerging area of research. The PYP model for primary education is accepted worldwide and appears to be a good model for learning in the complex global world. In India, the PYP curriculum is getting a positive response from parents, students and teachers. Many countries challenging the traditional approaches are developing new policies and frameworks for school education that cater to the globalized world's demands. Since primary years are the foundational stage of learning, greater emphasis is given to creating a relevant and challenging curriculum that prepares students for global citizenship and lifelong learning. In this direction, the Central Board of Secondary Education (CBSE), the Government of India, has started an international curriculum- CBSE-I, as an initiative toward internationalizing the Indian curriculum. Pushpanadham (2013) noted that some of the components of IB PYP are incorporated into this curriculum. This reflects the indirect influence of IB programs beyond their immediate users. The time is, therefore, ripe for investigating the adoption of IB PYP comprehensively in the Indian context and the conditions and processes created in schools to support the implementation of PYP. The findings of this research will be helpful for IBO to support schools for effective implementation of PYP and key stakeholders such as school leaders and teachers who aspire to adopt curricular and pedagogical principles incorporated in PYP.

Further, the findings will be helpful for researchers and policymakers and families. In a broader sense, this study adds to the evolving research on the diffusion of IB programs (a global product from IBO) in a national context, especially in a non-western context. The adoption of IB programs and specific PYP curricula in Asian countries (non-western) is increasing yearly. Most previous studies on the PYP curriculum are conducted in the western context, concentrated in the US, Europe and Canada. Thus, the findings of this research will significantly contribute to the understanding of the strategic adoption and assimilation process of schools implementing the IB PYP curriculum in a non-western, national context.

1.7 RESEARCH QUESTIONS

- How do the IB schools in India contextualize the IB PYP curriculum?
- How do practitioners interpret and implement IB PYP's educational principles?
- What are the conditions and curricular processes created by the school for the effective implementation of IB PYP?
- What are the challenges faced by the schools in implementing the IB PYP curriculum?

1.8 STATEMENT OF THE PROBLEM

A Study on the Curriculum Management of International Baccalaureate Primary Years Programme in India.

1.9 RESEARCH OBJECTIVES

1. To study the curriculum development in IB PYP schools.
2. To study the curriculum implementation in IB PYP schools
3. To study the curriculum evaluation in IB PYP schools.
4. To study the students' perceptions on PYP
5. To study the pedagogical leadership and professional challenges of PYP practitioners

1.10 EXPLANATION OF THE TERMS

The study includes certain keywords which have various explanations in the literature, thus to enhance precision, the keywords are explained and operationalized for the study

- *Curriculum Development*: Curriculum development is a planned, purposeful, progressive, and systematic process that involves the development of the content of the curriculum, planning the pedagogical approaches and assessment techniques in order to accomplish the vision of IB PYP. For the present study, the curriculum development process will be studied with respect to the development of Programme of Inquiry (POI) which is the written curriculum of the school.

- *Curriculum Implementation*: Curriculum implementation refers to classroom transaction of the planned content, pedagogical practices, and assessment techniques. In the present study, the curriculum implementation is studied in terms of pedagogical

practices, taught curriculum, role of teachers, students' behaviour, classroom environment and Learner profile implementation.

- *Curriculum Evaluation*: Curriculum evaluation is the process in which the school investigates whether the planned courses, learning experiences, and pedagogical practices produced the desired learning outcomes. For the present study, curriculum evaluation refers to self-study process, IB evaluation visit and student assessment.

- *Pedagogical Leadership:* Pedagogical leadership is an enabling process that exercises distributed leadership for designing and implementing curriculum by creating a democratic, collaborative and reflective environment in the school.

- *Professional Challenges*: Professional challenges refer to the challenges faced by principals, PYP coordinators, and teachers in effectively managing the PYP curriculum in the school within the broader Indian educational context.

Operational Definition of the Terms

- *Students' Perception*: Students' perception refers to the responses provided by students on the questionnaire related to school, teachers, curricular activities and their behaviour in general.

- *Teachers' Perception:* Teachers' perception refers to the responses provided by teachers on the questionnaire related to curriculum management in PYP.

1.11 DELIMITATION OF THE STUDY

The study was delimited to the IB PYP schools which have completed two cycles of program evaluation by the International Baccalaureate Organization.