International School Education for a Changing World
A literature review
1 September 2015
Context

As our Board Chair, David Thomas, noted in his presentation at the start of the school year, ACS has changed dramatically in shape and size over the past 48 years. And as we approach our 50th anniversary in 2017, the school continues to grow, evolve and improve, in order to meet the emerging challenges that lie ahead.

We continue to embrace:

- The ever-changing social, cultural and educational needs of our students, their families, and our staff
- The continual advances in teaching and learning methods and technologies, and
- The emerging trends and challenges in the field of international school education.

Recently, we have also reaffirmed our vision – Through learning, inspire all to make a difference – and have restated our values in active language:

- We engage in community
- We drive positive change
- We promote excellence through learning; and
- We enrich the international experience.

In September 2015, we will initiate a collaborative, school-wide, year-long process aimed at articulating elements of a renewed ACS International Schools philosophy and expected school-wide learning results. To launch this process, CIM has commissioned two literature reviews, aimed at enhancing our shared understanding of trends and challenges in the international education sector.

This first literature review, ‘International Schools for a Changing World,’ focuses on the evolving position and role of international education within the wider education sector. It has been written by Mallory Perry Ed.M. and edited by Christina Hinton Ed.D.

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We invite all members of our school community to read this literature review and let us know what you think. A formal consultation will run from 2 – 23 September 2015. On 16 September, 2015, the literature author will discuss the literature review at an after-school Twilight Seminar accessible by all. Consultation response forms and Twilight Seminar details are available on the CIM website. We look forward to your participation.

Benedict Hren
Head of the Centre for Inspiring Minds
1 September 2015
Introduction

In the 1960s the Philco-Ford Corporation imagined thirty years into the future in a short film, “Year 1999 A.D.” A computer sends health scans to a distant doctor, an automatic kitchen prepares meals in two minutes, and Jamie, a young boy of the future, attends schools in his own home. He learns from video and audio recordings on a giant home computer; simple multiple-choice tests on a “teaching machine” measure his progress and customize his lessons (Tom Thomas Corporation, 1967).

While the future portrayed in the film is not completely accurate, it does manage to anticipate certain aspects of modern life. How can we predict the future with some accuracy?

To accomplish this, futurists consider the past, analyze the present situation and emerging trends, and employ strategies to anticipate the future. As the Organization for Economic Co-operation and Development (OECD) explains, “Futures thinking… is not about gazing into a crystal ball” (OECD, n.d.a, 14). There are systematic methods for using data, frameworks, and creative problem solving to anticipate possible futures, such as forecasting, horizon scanning, scenario planning, and the Delphi method (Gupta & Clarke 1996; Rowe & Wright, 2011; Rasmus, 2008).

This literature review applies a futurist approach to considering the future of international schools in our rapidly changing world. Some forecasts estimate that about 65 percent of children entering grade school this year will end up working in careers that have not yet been invented (Davidson, 2011). In addition, as the world becomes increasingly globalized, students need to learn new kinds of citizenship skills that will enable them to participate in multinational politics and the global society (Gardner, 2006). It is important for educators to consider how education should adapt to prepare students for this changing world. One education futurist encourages us to think of “education as preparing young people and [communities] to deal with specific and complex 21st Century challenges” (Bolstad, 2011, p.3).

What roles might international schools play in this changing education landscape? Applying a futurist approach, this literature review considers the history of international schools, analyzes present data on international school communities, and reviews methods for anticipating possible international school needs and outcomes.

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1 The term futurists refers to individuals who systematically and scientifically use data, trends, expert opinions and strategic thinking to identify possible future needs and outcomes to guide preparation and planning in a variety of fields (What is a Futurist?, 2015).
History of the international school

In the history of education, international schools are relatively new, although there is no consensus on their single point of beginning (Bunnell, 2013; Sylvester, 2002). Between the mid-1800s and the early-1900s, the West entered a period of globalization in which trade and travel between countries began to increase significantly (Sylvester, 2002). At this same time, in European countries and in the United States, programs of mass education were beginning to take hold (Sylvester, 2002). Nationalism was the political theme de jure in the mid-1800s, but a small group of idealists began to build international schools on the enlightenment ideals of international cooperation through education (Sylvester, 2002).

Perhaps the earliest recorded international school began in the 1860s at St. Germain-en-Laye in France (Hallgarten, Tabberer, & McCarthy, 2015; Sylvester 2002; Dickens, 1864). In his magazine, All the Year Round, Charles Dickens used the term “international school” to describe it as one of several “international and corresponding schools for the middle and upper classes” (Dickens, 1864, p. 106).

Dickens (1864) points out that growing international trade and the “facility for rapid travel” (p. 107) had made the study of international cultures and languages essential. Over the course of their studies, these students at St. Germain-en-Laye, would travel to various corresponding campuses across the continent where they were taught not only by international teachers, but also by fellow and international students in a rich multicultural setting (Dickens, 1864; International Education, 1865; Sylvester 2002).

The purpose of this international school was to provide students a diversity and depth of education to match the increasingly multicultural society in which they lived. However, this experiment in international education did not last long; it was abandoned at the outbreak of the Franco-Prussian war in 1870 (Sylvester, 2002).

About the same time, outside London, another international school was starting out. Some historians point to the Spring Grove School, founded in 1866, as the true beginning of international schools, as it outlived by a decade the school at St. Germain-en-Laye (Sylvester, 2002).

The Spring Grove School was a boarding school similarly organized to educate students for an international world (Sylvester, 2002). In addition,
the school had a particularly idealistic foundation; the school founders “hoped to realize their vision of international harmony by the creation of a new type of education which would enable the citizens of different countries to become international ambassadors” (Stewart in Sylvester, 2002, p. 4).

The school founders were politicians and scientists, proponents of free trade and international disarmament, and they saw the Spring Grove School as a way to impact future social and political policy (Sylvester, 2002). The purpose of the Spring Grove School reached beyond international education for students by working for lasting social impact. However, this school too failed to continue past the turn of the century.

Of the several international schools that began during the 1800s, nearly all failed, due to social and political unrest of the times (Sylvester, 2002). These early schools grew up in response to the need for international cooperation and understanding, as globalization brought European countries closer together than ever before.

However, at the time, visions of international cooperation were not enough to sustain these new international schools (Sylvester, 2002). A few decades later, technology was advancing at an increasing rate, political and social changes supported increased travel and global communication, and a new generation of educators were ready to try again the international school experiment.²

The new international school

Following World War I, a new era of globalization began and the role of international education continued to grow and to change (Sylvester, 2002). In 1924 in Geneva, a school was started in reaction to the horrors of the Great War. The International School of Geneva, or EcoLInt, envisioned their school as a safeguard against future wars; a place where students nurtured international understanding and learned to work towards global peace (Hallgarten, Tabberer, & McCarthy, 2015).

Today, their mission statement includes echoes of these historical mandates:

... [to] prepare students for membership of communities that are socially and culturally diverse, for citizenship, and for engagement

² For more information on the early history of international schools, see Sylvester, 2002). See also Appendix: Recommended Readings.
with the political, ethical and environmental challenges of their times. We expect them to want to take an active part in making their world a better place. (Our Mission, 2011)

EcoLint had an additional practical purpose to serve the children of international diplomats working for the newly established League of Nations (Hallgarten, Tabberer, & McCarthy, 2015).

Sometime between the school at St. Germain-en-Laye in the mid-1800s and EcoLint in the early-1900s, international schools began. The growth of this movement was slow for several decades; a 1960s publication refers to international schools as a “new concept” (Leach & Knight in Bunnell, 2014, p.18).

Leach and Knight estimated there were about 50 international schools, according to their definition, however, another researcher at the time estimated closer to 400 worldwide international schools (Bunnell, 2014). These schools were often operated by an international organization, or represented curriculum of one nation being taught in another nation (Bunnell, 2014).

An education researcher in the 60s, Leach, attempted to categorize the growing international schools using four headings:

1. School that consider themselves “internationally minded” (Bunnell, 2014, p. 21), but with a student body of generally one nationality
2. American schools teaching American curriculum to students from expatriate families
3. National schools teaching in another country (e.g., Lycée International de Boston)
4. Schools that belong to the International Schools Association (Bunnell, 2014).

These classifications were just one attempt of many over the years to set straight just what makes an international school (Hayden, 2006; Sylvester, 2002; Bagnall, 2008). And as international schools began to grow, the challenge of categorizing and defining them grew too.

Twenty-five years after the first 400 schools were identified, 1000 international schools were in operation, and today, another 25 years later, there are over 7,000, each with their own explanation of what it means to be an international school (The New Local, 2014; ISC Research Ltd., 2015).
While no single categorization of international schools has yet been developed that takes into account all of the variety of these 7,000 schools, the most simple, widely-used definitions use features of the student body or curriculum to identify international schools (Sylvester, 2002).

Some of these definitions include:
- A school with an international body of students, teachers and administrators
- A school where students are taught in a language other than the host country’s language
- A school using a specific national curriculum from a country other than the host country, or a specific international curriculum like the International Baccalaureate (Bagnall, 2008; ISC Research Ltd., 2015; Hayden, 2006; Hallgarten, Tabberer, & McCarthy, 2015).

Matthews points out that international schools can also be categorized as “ideology-driven” or “market-driven” (in Hayden, 2006, p. 16).
- Ideology-driven schools are built to foster international camaraderie, cooperation and understanding. The main purpose of these schools is to make students feel at home in a global community (Heyward, 2002).
- Market-driven international schools fill a need for education—for example, from an expatriate community (Hayden, 2006).

While market-driven school can be for profit or not for profit, the increase of for-profit schools (unheard of 30 years ago, now two-thirds of the international school market) suggests that international schools that are wholly or in part market-driven are on the rise (The New Local, 2014).

A final categorization of international schools looks at the purpose they serve. For the most part, international schools have played four roles:
1. To create future leaders with the necessary cultural awareness to work for global peace (Hallgarten, Tabberer, & McCarthy, 2015)
2. To provide diverse, cultural and international instruction (Sylvester 2002)
3. To provide curriculum for expatriate students that is in line with their home country (Hayden, 2006)
4. To provide an alternative to local public and private schools (Hayden & Thompson, 2008).

One thing that all international schools have in common is that with their variety of students and families, teachers and administrators, international schools serve a uniquely “exclusive” community, outside or apart from
the host country community (Pearce, 2013). An understanding of international school communities will help to better inform our understanding of international school roles.³

**Community in international schools**

Social scientists have found that a strong school community strengthens the school, supports student learning, fortifies families and strengthens outside communities (Epstein & Salinas, 2004). Community can include:

- The school’s teachers, administrators, parents and students
- Local businesses, organizations and community residents
- Other schools, communities and organizations spread around the world (Slough-Kuss, 2014).

On the basic community level, teachers, students, parents and administrators all share the same goals of student success; their cooperation as a school community is the best method of reaching goals for students and schools (Ice, Thapa, & Cohen, 2015; Sanders & Epstein, 1998).

However, building school community can be challenging in an international school context, which is not united by nationality or culture, in most cases, and which is inherently “outside” of the host country community where they are located (Slough-Kuss, 2014; Pearce 2013). On the other hand, the cultural diversity of international schools can be a strength of the community, bringing depth and perspective, and supporting legitimate international education for students (Slough-Kuss, 2014; Heyward, 2002). Also, international schools play an important part in their community to provide support for challenges unique to their diverse student body (Heyward, 2002).

**Community members**

The basic school community has been called “the fundamental community” (Thompson in Slough-Kuss, 2014, p. 223), and it is made up of all those partners, stakeholders and participants involved in day-to-day school operations. These may include students, parents, teachers, administrators and staff.

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³ For more information on the recent history and roles of international schools, see Hallgarten, Tabberer, & McCarthy, 2015. See also Appendix: Recommended Readings.
In international schools, any of these community members may be international, or have experience living internationally (Hayden, 2006; Terwilliger 1972). Because of the variety of reasons that bring families to international schools, students and families may stay for only a short time, and their educational needs may depend on their home country requirements (Heyward, 2002). Local students and families who choose to attend international schools have different needs, which also must be met by the school (The New Local, 2015).

**Students**

Recent data collected by The International School Consultancy Group (ISC) can help provide a picture of international schools and their communities today. Because of the challenge of labeling and categorizing international schools, no data should be considered a comprehensive measure of all international schools.

For example, the data described below focuses on schools that offer English-medium curriculum in any country where English is not the primary language, or in any English-speaking country with a national curriculum different from that offered by the international school. While not all international schools are accounted for here, the data demonstrate the prevalence of English-medium international schools, and demonstrate the wide range of diversity found in international school communities.

In 2015, ISC reported 7,545 English-medium international schools serving 3.9 million students spread across six continents (ISC Research Ltd., 2015).

- More than half (4,181) of the schools are in Asia, with more than 2.3 million students attending across Asia (ISC Research Ltd., 2015)
- Of the 7,545 international schools in this study, just over a quarter (2,138) are bilingual schools
- Only about 1/5 (1,648) offer a US curriculum, and over 1/3 (3,106) offer a UK curriculum (ISC Research Ltd., 2015).

Of the 360 schools in the European Council of International Schools (ECIS) (251 of which are in Europe), ISC sampled 150 schools and found that over a quarter of the students are American, the next biggest representation of students (about 1/8) are Kuwaiti, followed by British (also about 1/8) (ISC Research Ltd., 2015). While these are aggregate measures from a sampling of international schools around the world, they do give a picture of the broad diversity represented in international
schools and their communities. To better understand a single school, or set of schools, data should be collected that applies to that particular community and to their circumstances.

**Parents**

Just like the students, parents at international schools come from a variety of backgrounds. Families attending international schools may be living internationally because of employment in an international company or foreign embassy, or because of military service, among other reasons (Heyward, 2002, p. 21).

Parents from a diversity of backgrounds play an important part in the culture of international schools (Slough-Kuss, 2014). Research has pointed out that a community full of international parents benefits from their variety of perspectives, and that parent participation in the school community, particularly on governing boards, can help to foster “healthy debate on important policy issues” (Bowley in Slough-Kuss, 2014).

Local parents increasingly make up a large portion of international school communities, and they bring their own support as stable members of the school community (The New Local, 2014). Recent research has shown that increasingly parents are sending their children to local international schools; a 2014 report on international schools using ISC data suggested that 4/5 of students at international schools in 2014 came from local families (Hayden & Thompson, 2008; The New Local, 2014). This is a significant increase from 30 years ago, when 1/5 were local students (The New Local, 2014).

Researchers point to a continuing trend of upper and middle-class families from developing nations sending their children to international schools to provide them with a level of educational excellence they do not find in their local schools (Hayden & Thompson, 2008). Local parents can also help to tie the school’s internal community to the local community (The New Local, 2014).

**Teachers and administrators**

Similarly, teachers and school leaders in international schools come from a variety of backgrounds (Terwilliger, 1972; ISC Research Ltd., 2015). In a sampling of 97 ECI Schools, about one quarter of the teachers were
found to be local to the schools sampled, one quarter North American, and one quarter British (ISC Research Ltd., 2015).

Schwindt pointed out that international teachers are in “an excellent position to foster international education through... the non-formal caught experiences, as well as the formal taught curriculum, [and that these] form essential factors of international education” (in Slough-Kuss, 2014, p. 220). In a study by Thompson in 1995, students reported that diversity among the teaching staff was highly important to the “promotion of international education” (Slough-Kuss, 2004, p. 225). Teachers and administrators who are experienced international travelers and citizens themselves, can be an important support to students who may be struggling with the experience of living in and adapting to a new culture (Heyward, 2002).

**Culture outside the school**

Sociologists suggest that beyond the community within the school, creating a community that reaches outside of the school is another important support for students’ learning and development (Ice, Thapa, & Cohen, 2015). Research on building these outside community relationships encourage “six types of actions that support successful family and community partnerships, including:

- Parenting guidance
- Clear communication
- Volunteer opportunities
- Encouraging learning at home
- Inclusive decision making
- Collaboration with the community” (Ice, Thapa, & Cohen, 2015, p. 12).

Because international schools are set up as an “outsider” to the local community, this can be a challenging. However, other independent schools, particularly in the United States are moving towards greater involvement in the local community, which may pave the way for international schools to similarly become more involved (Hadfield & Jopling, 2008). Particularly as local children increasingly attend international schools, building local community may come more easily (The New Local, 2014).

In the broader global community, international schools have the potential to play an important role in increasing global understanding, and in improving education throughout the world. Particularly because
international schools are not beholden to government regulations like national schools, they have a unique flexibility to pilot emerging education programs, and pave the way for future growth in education (Bagnall, 2008).

Also because of their unique multicultural community, international schools have “the opportunity, and perhaps the obligation, to teach for intercultural literacy” (Heyward, 2002, p. 22). International understanding does not come simply from learning another language, or reading about foreign history, but rather through immersion in a new culture and acceptance of new customs and perspectives (Heyward, 2002). International schools, perhaps like nowhere else in the world are the perfect setting for children to learn to be international citizens and for the instruction of future global leaders (Hayden & Thompson, 2008).

Looking to the future

From short-term forecasts to medium- or long-term futures thinking and scenario planning, systematic and creative methods can be used to prepare schools, companies and organizations for future changes and challenges. Using data and statistics, some near-future events can be anticipated and identified, but in the field of international education, as in all education, we need to look far beyond the near future.

Theorist and futurist Helmer-Hirschberg (1967) explained, when we are faced with looking into the future of complex social or political questions, where there is no established research to guide a theoretical answer:

… we are faced with two options: we can either throw up our hands in despair and wait until we have an adequate theory enabling us to deal with [social] problems as confidently as we do with problems of physics and chemistry, or we can make the most of an admittedly unsatisfactory situation and try to obtain the relevant intuitive insights of experts and then use their judgments as systematically as possible. (p. 4)

Helmer-Hirschberg acknowledges the challenge of looking forward into the future without hard facts or data, but he explains that with systematic and informed thinking and intuition, futures thinking can be a valuable exercise in forward-looking fields like education.

Futures thinking can be a generic term for looking beyond the data trends using expert and lay opinions, strategic frameworks and creativity
to anticipate and to identify possible future changes (Gupta & Clarke 1996; Rowe & Wright, 2011; Rasmus, 2008).

Futurists in the field of education use a variety of techniques that have been studied and verified, along with other methods that continue to be explored and tested. Some methods are intended to identify and better understand likely future events, and some methods focus on the process of developing flexible thinking about the potential future. Of these latter techniques the OECD (n.d.a) said, “It is about stimulating strategic dialogue, widening our understanding of the possible, strengthening leadership, and informing decision-making” (p. 14).

Below is a discussion of a few well-known methods that can be applied to exploring the future of international schools. While we cannot actually predict the future, we can use a variety of futures thinking methods to view an array of possible futures and create the flexible thinking needed to respond, in the future, to unexpected changes and challenges (OECD, n.d.a).

### Forecasting

Statistical forecasting is a quantitative method that uses data to identify trends and project short-term future changes, like forecasting future enrolment rates for the next several years (Arsham, 2015). Past and current data spanning a series of time is analyzed to identify a trend over time.

The OECD explains that “trends inform our ideas about what might happen through better understanding what is changing in education’s [current] environment.” (OECD, n.d.a, p. II2). That trend or patterns can be used to project forward into the future, anticipating a continuation of the identified pattern (Imdadullah, 2013).

For example, a pattern of growing enrolment over past decades allowed ISC to forecast that the 2015 enrolment of 3.92 million students in international English-medium schools would grow to 5.55 million in 2020 and 8.26 million in 2025 (ISC Research Ltd., 2015). The trend of growing staff from the same sample suggests that in 10 years, staff will more than double, from 352,936 in 2015 to 734,365 in 2025 (ISC Research Ltd., 2015).

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4 For more information about various futures methods, see OECD, n.d.a. See also Appendix: Recommended Readings.
While these patterns in data can produce useful projections in the short- or medium-term, such forecasting becomes unreliable if there is insufficient data or if the projection is too far into the future (Arsham, 2015). When used carefully and rigorously, forecasting can be a reliable and straightforward method for anticipating future change.

Because of the wide diversity of international schools, their students, curriculum and other factors, data should be analyzed carefully as it applies to a particular school. Consider data that is applicable to your school’s situation. Analyzing data trends for one context and applying to a very different context is an inappropriate use of forecasting.

Forecasting may not be an appropriate method in all cases of futures thinking. For example, in cases where there is no data collected, such as a new measure of student happiness in the classroom, forecasting is not a useful method.

Similarly, statistical forecasting may not be useful when patterns do not continue from the past in the same trajectory into the future. For example, while the number of teachers may have increased steadily over decades, if a new virtual method of teaching were adopted by all schools, the number of teachers might suddenly decrease.

To anticipate such unexpected trends and its unanticipated impacts on the future, futurists often combine statistical methods with other futures methods (OECD n.d.a).

**Horizon scanning**

Another method of short-term futures thinking is horizon scanning. Horizon scanning can be used as a general term to describe the process of seeking out emerging trends, but it is most often used to describe futures exploration of how emerging advances in technology and science will lead to changes in a given field (Cabinet Offices, 2013; OECD n.d.b; Stephens, 2011).

The OECD (n.d.b) explains, “[Horizon scanning] explores novel and unexpected issues as well as persistent problems and trends, including matters at the margins of current thinking that challenge past assumptions.” This sort of research is particularly relevant in fields where rapid changes in technology have a significant effect, such as healthcare.
technologies, or the use of Massive Open Online Courses (MOOCs) in higher education.

This is relevant particularly in education, where technology has become a common resource in classrooms around the world, and has been shown to impact student outcomes (Wong, Wong, & Pang, 2015; Keengwe, Schnellert, & Mills, 2012).

Because it involves an exploration of emerging trends, it is usually conducted through research of others work, looking to relevant researchers, thinkers, organizations and companies to identify emerging science and technology as they happen (OECD n.d.a). While this process does not directly lead to predictions of long-term outcomes, it can provide foundational information or understanding to support further exploration of possible outcomes based on emerging trends.

“A solid 'scan of the horizon' can provide the background to develop strategies for anticipating future developments and thereby gain lead time. It can also be a way to assess trends to feed into a scenario development process” (OECD n.d.b).

Scenario planning

Effective futures planning beyond the near future requires a combination of short-range methods, creativity and systematic collaboration. Scenario planning uses consensus and individual creativity to explore potential futures to create a deeper, broader perspective of potential needs.

Rasmus (2006) explains the goal of scenario planning is to strategically “[explore] uncertainty… challenge assumptions, identify contingencies, anticipate game-changing events, spur creativity” (p. 1). The key, he explains, is to use that creative, theoretical exploration of the future to help futures thinkers like policy makers design plans that are robust to a variety of possible futures (Rasmus, 2008).

Recent studies note that the use of scenario planning is growing in fields like public policy and business and it is recognized for its ability to lead to innovative and interesting research (Amer, Daim, & Jetter, 2013). The OECD is careful to note that scenarios used in planning should not be confused with a forecast or predictions of the future. “They are intended to serve as a basis for action, by helping decision-makers think
strategically about institutional change, and by illuminating the links between policies and outcomes” (OECD, n.d.a, p. 15).

Scenario planning methods could be categorized as predictive or explorative, depending on the outcome goals (Börjesson et al. in Nowack, Endrikat, & Guenther, 2011). One could also describe these categories with the questions, “What will happen?” and “What could happen?” (Nowack, Endrikat, & Guenther, 2011).

- Predictive scenario planning works to understand cause and effect in the short term to determine likely outcomes in the near-future.
- Explorative scenario planning uses creative, strategic thinking to look beyond the near future to possible futures farther in the distance (Nowack, Endrikat, & Guenther, 2011).

While futurists do not treat explorative scenarios as expected future outcomes, the process of exploration is the valuable outcome (OECD, n.d.a). By thinking critically about a range of futures, participants practice planning flexibly.

In scenario planning, participants follow a systematic process which helps to encourage critical thinking. The following outlines an example of a possible process:

1. A question of uncertainty is posed about the issue and timeframe at hand (e.g., what will the international community look like in 2065?)
2. A variety of uncertainties that apply to the question are proposed by participants and through an iterative culling process, the most pertinent uncertainties are agreed upon as the focus of the scenario exercise (e.g., diversity of students, number of students, availability of resources).
3. Participants then determine extreme possibilities for each of the uncertainties determined in step two; these possibilities are combined to create between one and four possible scenarios that “allow for the richest and most diverse narratives” (Rasmus, 2008, p.2) (e.g., competition from online schools drives students populations down to only several thousand throughout the world and 99% are local students, however, these are very wealthy students leading to consistent budget surplus for schools)
4. Finally, participants determine actionable items based on the gaps between the current practice or policy and the imagined future.

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5 Example questions and responses are not based on actual scenario planning and are only intended to illustrate the process.
6 The purpose of this exercise is not to determine expected future outcomes, but extreme possibilities to help lead to creative, flexible, out of the box thinking in the planning of future goals and trajectories.
Interdisciplinary cooperation adds to the richness and variety of the scenarios developed which enhances the key problem-solving experience of scenario planning (Rasmus, 2008).

Where short-term futures thinking focuses on trends and patterns, scenario planning draws heavily on uncertainties to fortify and enrich the final step of planning informed by the potential extremes (Nowack, Endrikat, & Guenther, 2011). Scenario planning should be a process of “systematic strategic thinking” (Schoemaker, 1991, p. 549).

While examples of scenario planning in education and other fields are available and can provide models of the process, they should be considered cautiously. When scenario planning is used or presented incorrectly, it can create misleading, unreliable information. Scenario planning is most effective when used by members of the organization to facilitate creative and “systematic strategic thinking” (Schoemaker, 1991, p. 549; OECD n.d.a).

Research has shown that by using scenario planning to anticipate far ahead into the future, organizations gain the perspective and long-range goals that help them adapt quickly to changes in the present (Amer, Daim, & Jetter, 2013). Wack notes that a key to effective scenario planning is “the ability to change mindset in order to re-perceive reality and [to develop a] macroscopic view of the business environment” (in Amer, Daim, & Jetter, 2013).7

**The Delphi method**

Similar to scenario planning, the Delphi method8 utilizes collaboration and consensus to identify possible future outcomes; key to the Delphi method is the use of a panel of expert who share opinions and work to reach a conclusion. In the 1950s, social scientists at the global think tank RAND devised a method of forecasting far into the future based on systematic collaboration and consensus of experts (Gupta & Clarke, 1996; Rowe & Wright, 1999). The Delphi method, has continued to be a widely-used

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7 For further details on methods for Scenario Planning, See, Amer, Daim & Jetter, 2013. See also Appendix: Recommended Readings.
8 The name Delphi comes from an oracle or prophet in ancient Greek lore (Gupta & Clarke, 1996).
and widely-studied method of futures planning, particularly in the field of education (Gupta & Clarke 1996; Nowack, Endrikat, & Guenther, 2011).

In an early paper on the method, Helmer-Hirschberg (1967) pointed out where data could not be called upon to forecast future trends, important policy decisions were typically being based simply on someone’s expectations of the future. The Delphi method was a systematic approach to replace this potentially unreliable method (Helmer-Hirschberg, 1967). This method relies on the intuitive judgment of a panel experts, strengthened by a systematic, iterative path to a consensus (Helmer-Hirschberg, 1967; Rowe & Wright, 1999).

At the start of the Delphi process, an organized series of anonymous questionnaires are completed by a panel of experts on the determined topic (e.g., what is anticipated enrolment in international schools in the year 2065?).

After each round of questionnaires, the moderator provides feedback to the panel, again anonymously, on the statistical response patterns of the last round (e.g., minimum: 7 million; maximum: 100 million; mean: 25 million; mode: 50 million) (Rowe & Wright, 1999). Feedback may also include a report of unique responses or arguments for a particular response so that all participants’ views are shared and panelists have an opportunity to learn anonymously from the other participating experts (e.g., 7 million international schools will be supplanted by low cost alternatives, dropping enrolment to 2020 levels) (Rowe & Wright, 1999; Gupta & Clarke, 1996; Helmer-Hirschberg, 1967).

Another round of questionnaires is completed, in which experts may alter their responses based on the feedback received (Helmer-Hirschberg, 1967). They may be asked to provide justification for their responses (Helmer-Hirschberg, 1967). Feedback and questions continue and in this way, the entire panel works towards an eventual consensus or a conclusion (Rowe & Wright, 1999).

Over the years, research on the Delphi method has found that it predicts accurately over the short and the long term when it is used appropriately (Gupta & Clarke, 1996).

One review of research listed the following pitfalls to effective predictions using this method: “conceptual and methodological inadequacies [of the topic being explored], potential for sloppy execution, crudely designed

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9 Examples are not drawn from actual research, but are hypothetical questions and responses used to illustrate the process.
questionnaires, poor choice of experts, unreliable result analysis, limited value of feedback and consensus, and instability of responses among consecutive Delphi rounds” (Gupta & Clarke, 1996, p. 187).

Another researcher pointed out that inconsistent methods of evaluating questionnaires and determining consensus is a major weakness of this method; with little or no specific models or directions, facilitators must determine the final consensus using only their best judgment (von der Gracht, 2012).

While care must be taken in the use of this method correctly, the original creators themselves pointed out that a great strength of the Delphi method is its flexibility to adapt to a variety of topics and questions (Helmer- Hirschberg, 1967). For example, recent research has explored futures thinking that combines the Delphi method with other techniques, such as scenario planning or focus groups (Landeta, Barrutia, & Lertxundi, 2011; Nowack, Endrikat, & Guenther, 2011).

In some cases, rather than looking for consensus, the valuable conclusion may be a stable state of disagreement between experts (von der Gracht, 2012). Keeping in mind potential pitfalls, the Delphi method can produce important perspectives on topics otherwise difficult to study.

The Delphi method is considered “one of the best known methods for dealing with open ended and creative aspects of a problem because it motivates independent thought and gradual formation of group solutions” (Gupta & Clarke, 1996, p. 186-87). This method is particularly useful in dealing with social issues, or ethical issues, because it allows for systematic and creative problem solving (Helmer-Hirschberg, 1967).

A summary of 179 papers on the Delphi method in the 1990s found that Education was the most common category in which the Delphi method was applied and studied (Gupta & Clarke, 1996). The Delphi method provides “structured ways of assessing and combining human judgment” (Rowe & Wright, 2011, p.1489) that fill a gap in the field of futures planning.10

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10 For more information on the Delphi method, see Rowe & Wright, 2011. For more information on combining the Delphi method with scenario planning, see Nowack, Endrikat, & Guenther, 2011. See also Appendix: Recommended Reading.
Conclusion

International schools play an important role for millions of students, and trends in the data suggest that they will continue to grow and to change over the next several decades. While no one can be sure what role international schools will play in the future, systematic and collaborative strategic thinking enables us to anticipate a variety of possible futures and “illuminates the ways that policies, strategies, and actions can promote desirable futures and avoid those we consider to be undesirable” (OECD, n.d.a., 14).

Learn more

If you would like to explore these topics further, the following publications are offered as recommendations.


The authors provide a detailed summary and analysis of various methods of scenario planning. Strengths and weaknesses are discussed, particularly relating to the use of qualitative vs. quantitative techniques. Charts are provided comparing various methods and describing various strengths and weaknesses. The paper presents research on the validity of various methods and provides recommendations.


This is a “thought piece” written in collaboration by researchers from the Royal Society of Arts, Manufacturing and Commerce and the European Council of International Schools. It reviews the recent history of international schools, their various roles and the way global changes are influencing their role. The authors discuss how international schools can lead the field of education, meeting future educational needs.


This booklet is part of a series, written for professionals engaged in education planning and administration. It describes diverse models for international schooling around the world.

Through a review of literature on the Delphi method, the authors explore various ways of using this method and evaluate their effectiveness. The bulk of the article discusses the combination of the Delphi method with scenario planning, focusing on the incorporation of expert opinions into the traditional scenario planning technique. The authors offer recommendations for the most effective way to combine methods.


Designed for stakeholders new to futures thinking, this guide is a primer on the use of futures thinking in education and includes recommendations for application. From the “Schooling for Tomorrow Series”, this document provides a review of literature, relevant statistics, and insights to guide futures thinking in education.


The authors present a review of the literature and analysis of statistical data on the effectiveness of the Delphi method. This paper identifies strengths and weaknesses of various applications of the Delphi technique, and provides recommendations for the most accurate use of the Delphi technique.


This paper is an in-depth look at the history of the international schools beginning in the 1860s through the early 1900s. Sylvester identifies lesser-known early international schools and explores their role in the development of international schools and international education.
References


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