



Putting futures literacy and anticipatory systems at the center of entrepreneurship and economic development programs – A View from the UNESCO Co-chair in Anticipatory Systems for Innovation and New Ventures

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PURPOSE The UNESCO Chair of anticipatory systems for innovation and new venture creation at the University of New Brunswick is focused on helping improve economic opportunities largely for entrepreneurs from disadvantaged regions and from marginalized groups. Research activities are conducted but, the primary objective is to use the concepts of foresight thinking and anticipatory systems to help targeted groups improve their economic opportunities. The article provides details on the chairs activities and how they have contributed to economic improvement for both organizations and communities/regions.

SUMMARY Integrating futures thinking and anticipatory thinking into programs can help improve economic opportunities The UNESCO Chair's approach has helped improve economic opportunities, for organizational and municipalities/economic regions. It is hoped that the results can be used to help others bring this approach into their programs. Perhaps those running/part of entrepreneur/small business development programs, accelerators and incubators will see the University of New Brunswick (UNB) UNESCO program and may look at ways to include futures thinking and anticipatory systems thinking in their programs. Finally, the approach has helped cities/municipalities, perhaps those involved in regional economic development will integrate the Chairs approach.

KEYWORDS: innovation, UNESCO, economic opportunities, foresight

1. INTRODUCTION

The objective and purpose of the UNESCO Chair of Anticipatory Systems for Innovation and New Ventures at the University of New Brunswick is to help improve economic opportunities largely for entrepreneurs from disadvantaged regions and from marginalized groups. The chair is a chair of

impact and practice, and while research activities are conducted, the primary objective of the chair is to use the concepts of foresight thinking and anticipatory systems to help the targeted groups improve their economic opportunities. The article provides details on the chairs activities and how they have contributed to economic improvement

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both at the organization level and the community/regional level.

The chair builds on the research and experiences of the two co-chairs, Dominic Blakely and Jonathan Calof, whose past work and research has resulted in a series of programs using futures thinking and anticipatory systems integrated within a broader program to help:

- 1) Start-ups and other small firms build more competitive and successful businesses
- 2) Cities, towns, municipal areas who are encountering economic difficulties create a better more prosperous future.

The program has also helped various government agencies in formulating economic based and other policies and programs but that has been a very secondary focus

The following article provides details on the structure of these programs and how both futures thinking and anticipatory systems are at the center of them.

The core program concept

At the core of both sets of programs are two fundamental concepts related to the chair objectives:

- 1) **Future thinking:** Any idea whether a new business idea, regional economic development plan or government policy will take time to come to fruition. Between idea generation (and research), decision making, implementation and then waiting an appropriate amount of time for the results to start showing, many years can pass. Therefore, it is important to think about policy, strategy, new products/services not within the context of the environment of today but a more distant future environment: What will this future environment look like and what strategies and policies will make sense for it? In the case of economic development, it is also what do you want your future to look like and how can you shape the environment to accomplish this.
- 2) **Anticipatory thinking:** Strategy and policy can only succeed if the external

environment supports it. For example, customers must want the product/service; competitors need to react in a way that does not undermine the new product/service; government regulations must be consistent with it, and so forth. In a way this does involve futures thinking but it also encompasses concepts such as competitive intelligence, market research, environmental scanning, analytics and many more that are at the center of an anticipatory system (see Calof and Bishop 2020 for more on this).

Programs aimed at Entrepreneurs, small businesses, start-ups

The J Herbert Smith Centre at the University of New Brunswick offers several entrepreneurship programs:

- 1) **Summer Institute:** A three-month accelerator program for early-stage entrepreneurs. This program includes several courses (for example, marketing, finance, packaging etc.), mentorship and opportunities to make pitch presentations.
- 2) **Energia Ventures:** A three-month program for in seed and pre-seed stage startups in energy and energy related areas (for example smart grid and clean technology). The program is similar in design to the Summer Institute program.
- 3) **MTME (Masters of Technology Management and Entrepreneurship):** A 12-month Master's program which requires that participants create a startup. Similar to the other programs, mentorship is provided along with a series of courses to help the participants understand both engineering at a master's level and the requirements for creating and running a successful business.

Consistent with the objectives of the UNESCO Chair, participants are largely from marginalized groups and from regions or countries that have economic challenges. The participants for the three programs in 2023 included: Atlantic Canada, Asia (Pakistan, India, Turkey, Iran and Iraq) and Africa (mainly

Nigeria). The largest proportion of participants came from Nigeria, India and Atlantic Canada.

These programs integrate futures thinking at the front end of the program. While entrepreneurs and start ups are eager to have their businesses succeed quickly, the programs direct participants to look at the temporal nature of their business. That is to realistically assess how much time it will take to develop the market ready version of their product or service, what time will they need to get regulatory approval, how much time to launch the product and how long will it take to be successful for them to justify the investment. This establishes, at the early stage of the program, a mindset which requires participants to think not of today but a future environment which in some cases will be greater than five years in the future.

Participants are then given a series of anticipatory system topics such as competitive intelligence, market research and sales. Core in these courses is the requirement to understand how the current and future industry participants will shape the future environment. To help accomplish this, program participants are introduced to several anticipatory tools, for example, timelining, back-casting, road mapping, stakeholder analysis, profiling and market assessment. There are also what would be considered non anticipatory or non futures thinking courses, such as packaging and Manufacturing outsourcing, Accounting/Finance, Human Resources, but even these are positioned in term of a view to a temporal point in the future and with an anticipatory lens. For example, in the accounting course, the entrepreneurs are tasked with developing future financial statements (forecasting) and challenged to justify them using anticipatory techniques. In stating what they expect revenues to be over the next five years, they are challenged with proving that the market will support it and that their assumptions on what the market would bear in terms of sales and product-market fit. The link between

anticipatory systems and packaging is also reinforced in terms of understanding how the customers will react to the look and feel, the environmental impact, the viability and the professional nature as well as what competitors look like in the existing market – the message they will take away must be based on a future view.

The program includes a course looking at developing market insight using events which is anticipatory in nature and teaches them how to organize and to mine information at conferences, trade shows, and even parties. As each of the program participants deliver pitches of their company multiple times in their respective programs, this part of the program asks that they note the questions asked, who asked the question, their body language and therefore what underlies the question being asked or the comments made. They must learn to anticipate future problems based on the current comments of experts in the room, and start to build up response mechanisms to inculcate suggestions and feedback, not only into their pitches, but also their timelines, product/service features, team makeup and dynamics as well as key partners for successful product/service implementation.

Each program is subject to an internal review which includes a de-brief. Anecdotal evidence suggests that the program has been successful leading several successful businesses such as Grey Wolf Analytics, Potential Motors, Stash Energy Storage, CleanMeter and Koffee Beauty.

Why are futures thinking and anticipatory thinking so important for this kind of program? Many will read this section of the article and feel that the courses as described are similar to other entrepreneurship, startup programs: Finance/Accounting, Manufacturing, Market Research etc. So, what does the UNB Chairs approach add? The Co-chairs of the program have seen many business plans both as part of their training programs and as judges in start up competitions. These, in many cases are well researched and well written.

Take the competitor part – many of these plans compare the product/service being developed to those of their competitors. Making a detailed assessment of the products on their competitor’s website and theirs. The customer research frequently includes surveys of customers. The problem is that when their product/service is ready for market, the competitors will have launched new products or services. What is on a company’s web page today will undoubtedly be different next year or the year after. Further what is on their webpages does not include the R&D they are currently working on. Similarly, what customers are saying they want today will likely change over the next few years. This is the dynamism of markets and why futures thinking and anticipatory thinking is so critical.

Programs aimed at regional economic development

Developed by Wayne Robinson (former Canadian diplomat), Roland Marcoux (facilitator) and Jonathan Calof, the regional economic development program was designed to provide community leaders with the skills needed to create an economic development plan. This program has been given to several municipalities in Canada (that are encountering economic problems) as well as to cities in other parts of the world. Conceptually, the program brings together community leaders (heads of the major employers in the region), government and political officers, association executives, academics and others in the region whose cooperation is needed to successfully develop and execute on a regional economic development plan.

The first step in this six-month program is instilling futures thinking. Under the guidance of an expert facilitator, the program asks participants to develop a shared vision of what they want their community to look like in the next 20 years. This part of the process begins with the development of a shared vision.

Here is an example from one of the programs: “By 20XX (name of the community) is a growing thriving hub of (name of province). New families are moving in and business is

expanding. Quality education and business opportunities are valued and available. This regions success is used as an economic development model for the rest of Canada” This process of building a shared visions is consistent with the definition of foresight in ForLearn, which the European Foresight Platform (EFP) developed under the auspices of the European commission:

“Foresight is a systematic, participatory, future-intelligence-gathering and medium-to-long-term vision-building process aimed at present-day decisions and mobilising joint actions” (ForLearn 2023).

This vision statement since it was developed by the community leaders serves a focal point for the rest of the program.

The next step in this process is to go backwards – from the future vision to the present, looking at what will be required for this vision to happen. At this point, the concept of competitive advantage is introduced. Whether applied to a company or to a community for the vision to happen, you need appropriate resources and a competitive advantage that can be leveraged. Defining what the community’s competitive advantage is and learning about how to assess it is key to the program success. The community leaders are asked to identify what their true competitive advantage is, or what it will need to be, for the vision to become reality. In one community it was proximity to the USA border and, equally important, that it was located on a main trucking route. Another community had difficult to find trees that form the base of quality furniture. In another community, the competitive advantage was weather related. With knowledge of the competitive advantage (existing or to be developed) and the vision that comes from it, the discussion once again goes to futures thinking and anticipatory thinking as well. Issue analysis is used to identify the major concerns that must be addressed for the vision to be attained within the context of competitive advantage. What resources are needed? Which stakeholders will the plan need to work with?

It is at this point that the anticipatory approach is introduced. Participants are taught about competitive intelligence and then challenged in groups to develop the intelligence needed to address the issues that stand in the way of attaining the vision. In one community they recognized that one of the issues to attract people and business was that they had a dated, poorly functioning hospital - a new hospital was needed. The group that looked at this used competitive intelligence to develop a plan that it hoped would lead to approval by the province for a new hospital and subsequently it getting built. Getting a hospital is a very lengthy process which requires addressing concerns of many stakeholders. It takes many years for the decision to be made, let alone for construction to be completed. This group developed incredible intelligence on the process as they were able to call upon various community members who had knowledge of this process (once again integrated) and they got their hospital approved and built.

Finally, with the vision established and the competitive advantage identified, the issues identified and the intelligence to address those issues developed by the participants, they now develop their community action plan which is presented to the community at large.

Some of the community economic development programs had comprehensive program reviews. For one of the programs participants were asked if the process (the training itself) provided “positive gains in community capacity building knowledge and skills (including facilitation, competitive business intelligence, and networking)?” The response to this question was an overwhelming yes (95% of program participants responded yes to this question). To validate that the program had produced positive economic development results, participants were asked if the creation of the plan had contributed to the economic development of the region. 90% of program participants responded yes to this question. Given that one of the benefits of the program was to help the participants also improve their business/professional opportunities, participants were also asked if this had happened as a direct result of their involvement of the process and 60% of

program participants responded yes. More, information on the evaluation of these programs is in Calof (2017).

Futures thinking and anticipatory systems single course approach.

The integrated programs mentioned above embed future thinking and anticipatory thinking within a larger program (entrepreneurship training or community economic development). The idea in the larger program is to provide more than just anticipatory and foresight training but to provide additional training/knowledge to help attain their objectives. In both programs, anticipatory systems and foresight thinking are integrated not only in single specific courses (for example competitive intelligence) but also by reinforcing the concepts in other parts of the program (for example futures thinking within the accounting course). The UNESCO co-chairs have found this approach to be very effective in creating impact. The program has also provided future think and anticipatory systems training with a single course approach. Competitive intelligence as a stand-alone course has been provided by the chairs throughout Atlantic Canada. There have been several varieties of these courses:

1. **Introduction to competitive intelligence:** This is a one to two-day course that introduces participants to both anticipatory systems in general and competitive intelligence specifically.
2. **Specialized competitive intelligence:** These are generally introductions to competitive intelligence courses with a specialization added in. Two examples of this are the event intelligence course and the project intelligence course. The event intelligence course gives participants an introduction to both competitive intelligence in general and how to develop intelligence at events. Several of the deliveries of this course training have been given to organizations going to the same event. The course is designed to teach the participants how to use competitive intelligence approaches to

maximize their opportunities at the event (see Calof 2023 for more on this topic). Another course is project intelligence in which participants learn about competitive intelligence and then conduct an intelligence project relevant to their organization with mentorship from the trainers.

3. **“Topic” training with competitive intelligence embedded in it:** These are one or multiple day programs helping participants make better decisions. The topic of the seminar is not intelligence but intelligence concepts are brought into various parts of the program. An example of this was a program designed to help exporters pick the correct distributors and agents. While the program was not a competitive intelligence program, in giving the training to the organizations, use was made of competitive intelligence techniques as a way to assist with distributor and agent selection. This was also the approach taken in a one-day seminar on how to choose the right export market and within an innovation program as well. In all these cases, competitive intelligence was brought into parts of the program to give participants a tool kit that can help with the seminar topic (picking the right market, the right agent/distributor, being innovative).

The Calof (2017) article also provides performance assessments of these programs which have been very positive in terms of creating economic opportunities for participants.

Other activities of the Chair

As the purpose of the chair as mentioned is impact and practice, other activities have followed this objective. First, an annual conference has been held. This conference has focused largely on futures thinking and future environments. For example, the last conference had Riel Miller (past head of Futures Literacy at UNESCO) and Martin Calnan (current UNESCO Chair for Futures Literacy in Finance – Ecole des Points

Business School) as speakers and panelists. Publications have also followed the chair objectives and while there has been several academic publications under the chair (for example Calof, Soilen, Klavans, Soilen, Abdulkader and El Moudni 2022 and Hakmaoui, Oubrich, Calof and El Ghazi 2022), the focus has been on publications which will help organizations develop futures thinking and anticipatory capabilities. The “Gaining Market Insights from Events” (Calof 2021), is a good example of this. The book consistent with the chair focus is on application and practice and is available to download for free. As well, a current book is in process looking at Big Data and Analytics for international decisions. This will also be available for free to download.

Conclusions and areas for potential impact

This article has described an approach to regional economic development and helping entrepreneurs and small business develop economic opportunities. The activities of the program have benefited from the support of University of New Brunswick and several other Universities, government and corporate funding. Elements of the program have also been delivered in India, South Africa and Morocco thanks to partnerships from several Universities who supported the UNB Chair nomination. Expansion into Nigeria is also being considered with several Nigerian institutional requests to bring the program there. The internationalization of the program has taken two forms – participants physically or virtually attending the University of New Brunswick program or the local institution doing most of the program with UNB providing the futures thinking and anticipatory thinking course and concepts.

Those who read this article should see how integrating futures thinking and anticipatory thinking into programs can help improve economic opportunities. Perhaps some reading this will consider bringing this approach into their programs. As well, there are many entrepreneur programs operating around the world. As one example of this, the University of New Brunswick is part of the Global Accelerator Network (GAN), a global

community linking 128 accelerators. Perhaps those running accelerators and incubators will see the UNB UNESCO program and look at ways to include futures thinking and anticipatory systems thinking in their programs. Finally, as the approach has helped cities/municipalities, perhaps those involved in regional economic development will integrate the Chairs approach.

Note: The ideas and opinions expressed in this article are those of the author and do not necessarily reflect the views or official position of UNESCO.

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