# DO NOT BLOCK THE WAY OF INQUIRY!



## DARRYL TOERIEN FOSIL UK

Darryl Toerien is Head of Inquiry-Based Learning at Blanchelande College, Guernsey, Channel Islands, UK. He is also an elected member of the Section Standing Committee for School Libraries in the International Federation of Library Associations (IFLA) and a co-opted member of the Board of the UK School Library Association. He is also originator of FOSIL (Framework of Skills for Inquiry Learning, (2011) and the FOSIL Group (2019). I was delighted to be contacted by Lee about writing a follow-up article for ACCESS reflecting on my progress as Head of Inquiry-Based Learning at Blanchelande College in Guernsey since my appointment in September 2021. As with Lee's previous invitation (Volume 36, Issue 2, June 2022), I marvelled at the synchronicity of her request, except this time I was finishing off a submission to the UK School Library Association 2023 Enterprise of the Year Award, which focussed on establishing a secondary school library that is integral to the educational process as envisioned by the IFLA School Library Manifesto (IFLA, 2021), and as outlined in the IFLA School Library Guidelines (IFLA, 2015). The school library becomes integral to the educational process through its instructional program, which the Guidelines outline as essentially consisting of the following activities:

- Literacy and reading promotion (includes appreciation of literature and culture)
- Inquiry-based teaching and learning (includes media and information literacy)
- Technology integration
- Professional development for teachers.

Inquiry, understood in terms of the *Guidelines*, is both central to the program and encompasses all of the activities that make up the program. Inquiry is, therefore, also key to ensuring a balanced program. Consequently, the specific focus of my submission was inquiry, which aligned my submission neatly with Lee's proposed article.<sup>1</sup>

I start with Charles Sanders Peirce's corollary upon the first rule of reason (emphasis added):

Upon this first, and in one sense this sole, rule of reason – that in order to learn you must desire to learn, and in so desiring not be satisfied with what you already incline to think – there follows one corollary which itself deserves to be inscribed upon every wall of the city

<sup>&</sup>lt;sup>1</sup> Note that from September 2021 – October 2021, there was one full-time librarian. From October 2021 – January 2023 there were 1.5 FTE librarians, but the main focus of the 0.5 FTE librarian until recently has been taking over responsibility for the Extended Project Qualification (see later). The 0.5 FTE librarian has been appointed a full-time librarian from February 2023. This increase in staffing is a consequence of the successful implementation of the library's instructional program and motivated using <u>ASLA-ALIA</u> <u>Recommended Minimum Information Services Staffing Levels</u>.

of philosophy: **Do not block the way of inquiry.** (1955, p. 54)

However, the *Guidelines* identify two broad challenges to inquiry, which are summarised here: Creating a sound instructional model of the inquiry process

involves years of research, development, and practical experimentation, and schools without a model recommended by their education authority should select a model that aligns most closely with the goals and learning outcomes of their curricula, rather than attempting to develop their own models (p. 41).

Moreover,

as teachers and students apply the [chosen] model they may wish to adapt the model to serve school goals and local needs; however, caution should be exercised in adapting any model, because without a deep understanding of the theoretical foundations of the model, adaptations may eliminate the power of the model (p. 43).

Instructional models of the inquiry process incorporate essential metacognitive, cognitive, emotional and social learning skills that are "best developed progressively within a subject context, with topics and problems drawn from the curriculum" (p. 42). Therefore,

inquiry-based learning activities should be designed to promote progression and continuity in students' learning, which means that skills must be introduced progressively through stages and levels, and a school librarian should take a leadership role in ensuring there is a systematic approach to teaching an inquiry process that is guided by a school-based continuum of media and information skills and strategies (p. 43).

Understanding that these two challenges are fundamentally related meant that both could be addressed at the same time.

**FOSIL** is an instructional model of the inquiry process that was adapted by the author from the <u>Empire State Information Fluency Continuum</u> (ESIFC) in 2011. The ESIFC was chosen as the basis for FOSIL precisely because it is both a sound instructional model of the inquiry process (developed in 2003) and a highly detailed, systematic and progressive framework of inquiry skills from Reception to Year 13 (developed in 2009 and re-imagined in 2019). This made FOSIL the obvious choice for Blanchelande College.

However, as Barbara Stripling, the originator of the ESIFC, reminds and exhorts us, a sound instructional model is only the first step towards "structuring teaching around a framework of the [inquiry] skills that students must develop at each phase of inquiry over their years of school and in the context of content area learning" (2017, p. 52). This task presents a further, more complex, challenge that is unique to each school and its library/ian(s), to use Anthony Tilke's term for the school library and librarian(s) as a complex interdependent system (2015), even though individual stories will have features in common.

Neil Postman and Charles Weingartner made the case more than 50 years ago that "of all the 'survival strategies' education has to offer, none is more potent or in greater need of explication than the 'inquiry environment'" (1971, p. 36). Sadly, the great need for explication remains. Although the reasons for this are beyond the scope of this article, some observations are necessary. Postman, in his provocatively titled The End of Education: Redefining the Value of School (1996), highlights the already growing preoccupation among educators with "the engineering of learning…and teaching methods based on research in cognitive science," lamenting the shift from providing compelling

metaphysical reasons for learning to inventing ever-more technical methods of instruction (p. 26). More recently, Michael Young (2022), in an interview reflecting on his very influential work on powerful knowledge, was asked what advice he would give to teachers interested in applying his ideas about powerful knowledge to how they interpret their school's curriculum. Young replied (my emphasis added):

I would remind them of a point [Russian psychologist] Lev Vygotsky made: that acquiring knowledge in school has to be the voluntary act of a learner. You can't actually teach anybody anything; they have to learn it. You can help them, but they've got to have that desire to know. If you haven't encouraged students to engage in the process of acquiring knowledge, which is a very difficult process, then all you get is memorisation and reproduction in tests.... The current interest in the curriculum overlooks this point. It's so concerned with saying, "Have we got the knowledge?" that it forgets to ask, "How is the knowledge being acquired?"

Young's comments bring us full circle, reminding us that the dynamic inquiry process of coming to know and understand the world and ourselves in it is the outworking of an inquiry stance of wonder and puzzlement, and that, as the *Guidelines* highlight,

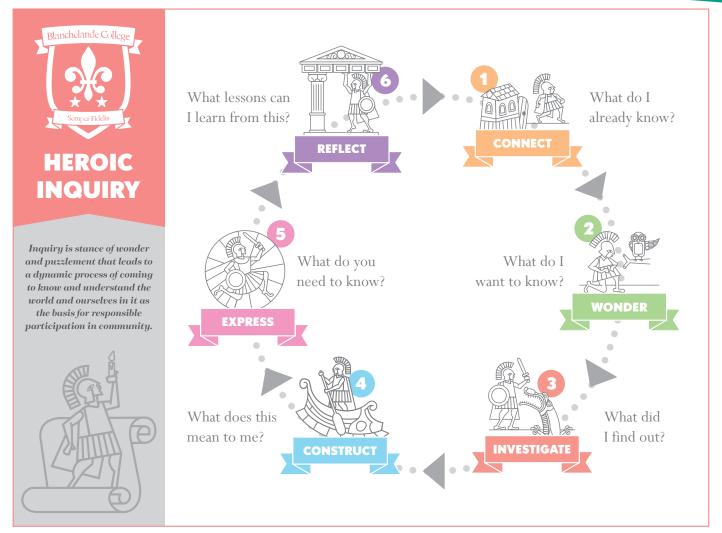
in deciding to use a process approach to inquiry-based learning, school librarians and teachers face the same fundamental issue [which is] how to influence, orient, and motivate the pursuit of learning using a process of discovery that encourages curiosity and the love of learning (p. 43).

This revaluing of educational ends and means provided an important backdrop for implementing an inquiry-centred instructional program.

Even though Blanchelande College offers a GCSE/A-Level educational pathway, which tends to be content-heavy and exam-focussed, the philosophy that guides the school is that of a liberal education, which has intellectual freedom as its ultimate goal, and in which academic disciplines (or subjects) both equip students with bodies of knowledge and enable the methods appropriate for building and sharing knowledge within and between those disciplines. The school visualises this educational process in terms of the Hero's Journey, which is powerfully expressed through a rich iconographic vocabulary developed by the Design Director (see, for example, the <u>College Prospectus</u>). This process of becoming knowledge-able – that is, to become increasingly able to extend knowledge in action that is directed towards the common good and individual enrichment (Wells, 2001) – is the inquiry process as embodied in and through FOSIL. The obvious starting point, then, was to visualise FOSIL using the existing iconographic vocabulary of the Hero's Journey, and specifically in terms of the *Heroic Inquiry* journey, which now appears in all student planners. Moreover, and in consultation with Barbara Stripling, we developed a simplified version of FOSIL specifically for use in primary school (download as JPG), and the following version of <u>Heroic Inquiry</u> now appears in poster form in *all* classrooms around the school.

Our second step was to consider how to begin structuring teaching around the underlying framework of inquiry skills, which may be linked to induction, especially in transition years, but clearly can't be limited to it. To focus this work, we extracted the priority inquiry skills in transition years (download as PNG). Because inquiry, especially in the form of a Signature Work,<sup>2</sup> is a distinguishing feature of a liberal education, our next step was to embed a Signature Work inquiry in each phase of the school, focussing on transition between phases and priority skills.

<sup>&</sup>lt;sup>2</sup> A Signature Work is a substantial inquiry-based investigation of a significant problem that is personally defined, and, consequently, bears the unique imprint of its author. See <u>What Liberal Education Looks Like</u> (AAC&U, 2020).



### Fig 1: FOSIL cycle primary

#### Signature Work inquiries:

- Year 6, drawing together curricular work in Art, English, ICT, Library, Mathematics and Science, and leading to a <u>CREST Bronze Award</u>. See FOSIL Group Forum topic, <u>Year 6 (Grade 5)</u> <u>Interdisciplinary Signature Work Inquiry @ Blanchelande College</u>.
- Year 9, drawing together curricular work in English, ICT and Library, and leading to a compulsory GCSE English Spoken Language Endorsement in Year 9 and a voluntary <u>Higher Project Qualification</u> (HPQ) in Year 10. See FOSIL Group Forum topic, <u>Year 9 (Grade 8)</u> Interdisciplinary Signature Work Inquiry @ Blanchelande College.
- Year 12, leading to a voluntary <u>Extended Project Qualification</u> (EPQ) in Year 12/13. The Interrobang!? Inquiry Course, which is compulsory for all Year 12 students, has made a noticeable difference in purposeful take up of the EPQ. This culminated in our very successful inaugural celebration of Sixth Form Signature Work in November 2022. See FOSIL Group Forum topic, <u>Year 12 (Grade 11) Interrobang!? Inquiry Course @ Blanchelande College</u>.
- While not yet at Signature Work inquiry level, we have begun to <u>reflect on what this might</u> look like in Infants (Reception - Year 2) in the FOSIL Group Forum.
- The implementation of the inquiry-centred instructional program has not been restricted to these transition-year Signature Work inquiries, and inquiry-based collaborations with classroom-based teachers is a regular feature in the weekly Principal's Newsletter.

and the second s	End of Year 2	End of Year 6	End of Year 9	Over Years 10-11	Over Years 12-13
Connect	<ul> <li>Shares what is known about the general topic to elicit and make connections to prior knowledge</li> </ul>	<ul> <li>Generates a list of key words for a research-based project with guidance</li> </ul>	<ul> <li>Revises the topic as needed to arrive at a manageable topic for a given research situation</li> </ul>	<ul> <li>Identifies key words, concepts, and synonyme, both stated and implied, for tropic and uses them to burther research</li> <li>Denvilops a schema or mind map to express the big ideas of interest</li> <li>Denvilops and refines the topic proleme, or question independently to arrive at a worthy and manageable topic for inquiry</li> </ul>	Gathers context about the time period, people, and issues surroading the topic by expediate laterally across both primary and secondary sources Explores produces or quantitors for which there are multiple answers or no "best" answer
Wonder	<ul> <li>Develops "I Wonder" questions with the class while reading or listening to texts about the research topic</li> </ul>	<ul> <li>Begins to assess questions to determine which can be answered by simple facts, which cannot be answered, and which would lead to an interesting inquiry</li> <li>Forms tentative thesis about main ideas with guidance</li> <li>For science tapics, forms hypothesis ("in. then" statement) that can be "tested" through research or experiment/experience</li> </ul>	<ul> <li>Refines questions to guide the search for different types of information (e.g., overview), bijedea, specific detail, cause and effect, comparison)</li> </ul>	Refins questions to provide a framework for the inquiry and to fulfil the purpose of the research (e.g., questions to lead to historical context and interpretation; questions to elicit accurate facts about scientific problem or issue)     Plans inquiry to test hypothesis systematically or gather evidence to validate thesis	<ul> <li>Creates questions to lead to basis information and, in addition, to information that is more critical, complex, and diverse in perspectives</li> </ul>
Investigate	Sources   Recepties the systematic way the liberay organizes fiction and picture books and that fiction books of interest can be located by using that organization Endence   Distinguishes between Fact and opinion Endence   Distinguishest between Besiter Besiter Besiter Endence   Distinguishest between Besiter Besiter Endence	<ul> <li>Sources   Evaluates print, video, and electronic sources (both primary and escondary) for relevance to the topic and credibility of author) (creator/publisher</li> <li>Sources   Selects and uses an appropriate print, video, or electronic source to answer questions</li> <li>Evidence   Los analyze multiple points of view from multiple sources to determine similarities and differences</li> <li>Making Somie of Information within a source for www.</li> <li>Evidence   Evaluates information within a source for view</li> <li>Making Somie of Information and Notetaking   Uses a backing at lease shource in information in a conclusion, analyzing information and Notetaking   Uses a paring sitemation to the topic of each paragraph, noting the amount of supporting details for the topic of each paragraph</li> <li>Making Somie of Information and Notetaking   Uses a view on notetaking strategies (e.e. outhing, underling strate of Information and Notetaking   Uses analyzing information and Notetaking   Uses view on notetaking strategies (e.e. outhing, underling, budies of Information and Notetaking   Uses analyzing information and Notetaking   Uses and and supporting details for the topic of each paragraph</li> <li>Making Somie of Information and Notetaking   Uses analyzing and the propose</li> </ul>	<ul> <li>Source   Ues organizational systems and electronic search strategies (Rev work, subject heading) to locate appropriate resources</li> <li>Sources   Uesa different formation is a strategies of holomation maps, and digarom) as sources and information for- perspective, and bias of sources and information for- perspective, and bias of sources and information</li> <li>Evidence   Selects high-quality information from multiple sources that anyones the research quality information</li> <li>Evidence   Selects high-quality information from multiple sources that anyones the research quality information the perspective, and holes of sources and information from multiple sources that anyones the research quality information for the source of the sources and the source influences the interpretation of information and Notestaing   Howfies micronceptions and reviews iceased on both the explicit and implicit meaning of text</li> <li>Making Sense of Information and Notestaing   Evolptice indicate information and Notestaing   Evolptice and implicit meaning of text</li> <li>Making Sense of Information and Notestaing   Evolptice and implicit meaning of text</li> <li>Making Sense of Information is capture com thinking and information and reviews being noted in works and phrases, summarized, paraphrased, or quoted</li> </ul>	Sources   Uses the organizational features of a book as well as abstract, tables, charts and first and last chapters to locate main ideas, specific supporting evidence, and a balanced perspective Sources   Uses advanced suarching strategies (Boolean operators, Truncation, showing and format filters, and the strategies and locate appropriate resources Sources   Uses advanced specification of the author, narrow searches and locate appropriate resources Sources   Uses advanced or publication, and length or comprehensiveness, and point of a source by assessing the credentials and reputation of the author, comprehensiveness, and point of view or the strates based on relevance and usefulness to answer comprehensiveness, and point of view or balance   Evaluates the authoriseness, point of view, perspective, and purpose of the information for authority, a source e and challenges the tax while reading or whowing to ensure heated information on Notestaking   Causetions and challenges the tax while reading or whowing to ensure comprehensiveness, and point Sourceaking   Takes notes using one or more of a variety of notestaking strategies induling reflecting on the information (e.g., graphic organizen, two-column notes, concept maps)	<ul> <li>Source:   Uses search-engine organizational features (e.g., a)gotth determining coder of results, differentiation of sponsored content, beginning text, URL) to locate web band information to answer research questions</li> <li>Source:   Seak Minimitch in the Minimitch in Minimitch in Minimitch and Minimitch in Minimitch and Content (e.g. A)gotther (minimitch in Minimitch), Informational searches by using two feas and thermation additional searches by using two feas and thermation in the topic to determine commonships and differences in paids internet, Comprehension, and depth of specific balance perspectives</li> <li>Source:   Contrasts primary and secondary sources on the topic to determine commonships and differences in paids intern, comprehensioners, and depth of specific balance perspectives</li> <li>Evidence   Analyses degrees of blas (from slight) stanted perspectives</li> <li>Evidence   Analyses degrees of blas (from slight) stanted perspectives to heavily stanted progenando and the impact of that blas</li> <li>Making sense of Information and Notestaking   Challenge interastion across multiple ittel), and thisting pos- linearly tuning medied (fints and milliple site).</li> <li>Making sense of Information and Notestaking   Enderson on ontops (perspin) in a reflection of controls to sportson additional sources</li> </ul>
Construct	<ul> <li>Sorts books by fiction vs. nonfiction</li> <li>Participates in discussions to draw conclusions about a topic or story</li> </ul>	With help, organizes notes and ideas and develops an outline, mind map, or graphic organizer     Forms own opinion or claim and uses evidence from texts and clear reasoning to back it up	<ul> <li>Forms opinions, judgments, and claims backed up by supporting evidence and clear reasoning</li> </ul>	Organizes information independently, deciding the tructure based on the relationships among ideas and general patterns discovered     Oraws clear and appropriate conclusions supported by evidence and examples	<ul> <li>Develops a line of argument or claim that incorporates and/or refutuse competing interpretations or conflicting evidence with credible evidence</li> <li>Bailds a conceptual tranework by synthesizing ideas gathered from multiple sources</li> <li>Develops own opinion, perspective, or claim and supports with evidence and a clear line of reasoning</li> </ul>
Express	<ul> <li>Uses writing process, emergent writing, and drawing to develop expression of new understandings</li> <li>With help, makes a list of the source(s) used with title and author</li> </ul>	Presents information clearly so that main points and supporting vederes are readily understood by sudience Modifies and revises own work based on feedback from teacher and peers. Provides a bibliography of all sources used according to model provided by teacher	<ul> <li>Develops a line of argument or claim with a line of reasoning, class supporting evidence, and attention to refuting counter arguments and claims</li> <li>Creates products for authentic reasons and audiences</li> <li>Otes all sources used according to local style formata</li> </ul>	Creates a product and presentation to present an argument, claim, point of view, interpretation, or new model most effectively for a specific audience Cites all sources used according to standard style formati Embede clastions to specific information, visuals, or sound when appropriate	<ul> <li>Drifts the presentation/product to present the line of reasoning and violence for an argument, claim, point of supporting evidence</li> <li>Publishes final product for an authentic audience and real-world application</li> <li>Evaluates own product and process throughout the wor and uses self-assessment, teacher feedback, and peer feedback to make revisions when execusary</li> </ul>
Reflect	Identifies own strengths and sets a goal for improvement     With help or with the class, asks, "What do I wonder about now?"	Reflects on new understandings, the effectiveness of the product and presentation, and the experience of the process of inquiry     Identifies own strengths and sets goals for improvement	<ul> <li>Reflects on own emotional and intellectual experience through the process of inquiry</li> </ul>	<ul> <li>Records and reflects on individual experience of the inquiry process – the hardest part, best part, important skills learned, insights experienced, emotional highs and lows, etc.</li> </ul>	<ul> <li>Identifies own strengths (academic, social, and emotional) and sets goals about specific ways to improve in the future</li> </ul>

Figure 2: Stages of FOSIL and indicators of achievement across transition years.

Of this work, Barbara Stripling writes:

The in-depth instructional program delivered by the Blanchelande librarians is an exemplary model of embedding inquiry into the teaching and learning of a school, thus empowering students to ask questions, pursue answers, and, as a result, build knowledge that is academically sound and personally meaningful. (SLA Enterprise of the Year award submission for UK, personal correspondence, 27/01/2023).

Inquiry does not exist in isolation, and neither does the program, which the Guidelines make clear. It is worth concluding, therefore, with a brief reflection from the perspective of the Guidelines on other factors that determine the extent to which the library is integral to the educational process.

In terms of the programme:

Reading and literacy promotion: Inquiry, which aims at building knowledge and understanding from information, is dependent on reading in its fullest sense, which includes non-fiction and fiction. Therefore, and in addition to many of the usual activities associated with developing a culture of reading, timetabled reading for learning, which is a key whole-school academic target, is a distinguishing feature of our Signature Work inquiries. As the Director of Studies notes, this is not at the expense of recreational reading and literacy promotion: Between December 2021 and December 2022, Senior student (Year 7-11) enjoyment of reading increased from 5% lower than the average identified in the National Literacy Trust Annual Survey to 11% higher, and 10% more students reported regular use of a library to take out books.

- Technology integration: The framework of inquiry skills that undergirds FOSIL provides us with a very powerful tool for determining which skills are technology-dependent, either by definition or in use. This, in turn, allows us to approach the adoption and integration of technology from the perspective of inquiry-based teaching and learning needs, and also informs our PD for teachers (see below).
- Professional development for teachers: We have contributed to the INSET programme at the start of every term, both whole-school and optional. We have also contributed to Heads of Department and departmental meetings. Where appropriate, these presentations are freely available in <u>FOSIL Presentations</u> on the FOSIL Group web site.

More broadly:

- The school recently reviewed its aims, which now include explicit reference to the intellectual life of inquiry. Our concern with inquiry is, actually, about developing the student as inquirer, which is why there is, unsurprisingly, a very close correspondence between the seven aims taken together and the Portraits of an Engaged and Empowered Inquirer in the FOSIL Group Forum.
- Crucially, FOSIL-based inquiry is also integral to the educational process at a policy level, most importantly the publicly available <u>Curriculum Policy</u>, which also includes the content area Unit Proforma developed with the Director of Studies, and the accompanying Lesson Plan Proforma, both of which reference FOSIL. We are currently working with the Director of Studies on an Academic Integrity Policy, which is linked to the development of digital/media and information literacy skills within the FOSIL-based inquiry process and in content area teaching.
- Finally, the Head of Inquiry-Based Learning is a member of the Academic Strategy Committee and the Education Sub-Committee of Governors.

#### Concluding statement by the Principal

Although the creation of a well-proportioned library space and a suitable budget was a highly significant and symbolic statement of intent, this material and financial aspect proved to be comparatively simple to achieve. Our vision was for a library that facilitates liberal education in the truest sense – students capable of independently inquiring into subjects and learning to question perceptively and think deeply. However, it took the appointment of a Teacher-Librarian with insight into the inquiry process and the subsequent creation of an inquiry-based learning department for us to begin using this vital resource to effectively equip students (and their teachers) with the knowledge that enables them to get more knowledge for themselves. As evidenced above, the embedding of FOSIL-based inquiry across all key stages and subjects is well underway, as a consequence of which the library has become integral to the educational process of the school, to the great and lasting benefit of our students.

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