What if becoming information literate were an adventure?

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Abstract

What if becoming information literate were an adventure? This question was posed in a keynote for the Creating Knowledge Conference 2021. It was answered in a thought piece by examining adventure-based ways to prepare students to be information literate adults through the principles and mechanisms that people find arousing and pleasurable and that are not classically a part of university pedagogy. How might these mechanisms be used to engage students more in the IL learning process and to encourage them to pursue being an information literate person as a lifelong endeavor? Adventure is presented as an experience that is situated, soft or hard, emotionally charged, challenging and rewarding. The risk aspect of adventure, often linked to danger, is also examined. Some of the dangers that exist in the management of information are explored (e.g., traps in sharing practices, seductive novelty and bypassing reason) as well as the personal costs of not managing information literacy well. How we nevertheless find danger alluring is explained in terms of arousal, as well as how we navigate zones of danger and delight with the help of protective frames. In order to arouse and sustain student engagement in becoming information literate adults, the value of interest is also introduced with the four-phase model of interest development. Suggestions for where to get started in translating the mechanisms of adventure, danger and interest into theoretically motivated and enjoyable teaching in order to support student growth as lifelong information literate adults are woven into the text for reflection.

Keywords: adventure, danger, interest, information literacy, pedagogy

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Introduction

> "In science, a discrepancy… is always an important clue; it means that something has been overlooked, something new is awaiting to be discovered"
>
> (Freeman Dyson, 1979, p. 255)

There will always be more we don't know than we'll ever know, social scientist Gudmund Hernes argued in an Academia Borealis 2021 talk about whether universities will survive the 21st Century. Accordingly, the great hunt for knowledge will never end. Doing that well, in ethically sound ways, is foundational for information literacy (IL). IL practice is complex with traps that people frequently fall into. Therefore, why not consider the process of becoming an active information literate person an adventure?

After all, information literacy is critical in our academic hunt for the great unknown – a kind of academic adventure in its own right. Like any good hunter, we need to prepare before we head out. We need to know where to go and how to catch what we are looking for. We need to evaluate what we find and tell about it in convincing ways so that people pay attention to it, can judge its veracity, and can find their way back to it another time should they so desire. And then, in the name of sustainability and open access, we can let go of what we find unscathed because, like catch and release, we don't need to keep it. The catch will live on in what we report. Others may use that to find their way back to our original information, to determine how to find similar or related information, or to even find new information just waiting to be discovered for the very first time. Also, it's a venture with potential perils along the way.

If we invite learners to join us on this kind of venture in compelling ways while also inspiring them to develop a personal interest in being a practicing information literate person long after they leave their studies, becoming a skillful hunter can become more than just an academic exercise, but a lifelong endeavor. And, as both Freeman Dyson and Gudmund Hernes remind us, such work will never be done; there will always be more unknowns to pursue, not to mention potential perils to prevail over. That, too, is an important part of adventure.

What does it mean to become information literate?

In the definition of information literacy I am using in this work, it "encompasses the knowledge, skills and attitudes needed to be able to discover, evaluate and use information sources effectively and appropriately in order to answer questions, solve problems, create knowledge and learn" (Nierenberg et al., 2021, p. 79). This definition puts source-related work at the core of the definition – namely finding, evaluating and using information well. This source part of our definition is commensurate with the work of the Chartered Institute of Library Information Professionals (CILIP), where IL is defined as "the ability to think critically and make balanced judgements about any information we find and use", adding that this "…empowers us as citizens to reach and express informed views and to engage fully with society" (CILIP, 2018,

p. 3). However, that is only the case if we actually own and practice what we know and can do.

Stepping into the field of adventure, we recognize immediately the difference between the assertions "I can climb" and "I am a climber". That difference demarks knowing or being able to do something versus incorporating what we know into our lifestyle or our identity of who we are. Think about that in terms of teaching information literacy where the student take-away goal of "I am (or becoming) an information literate person" rather than "I have learned about information literacy" is the goal. This first take-away is easier to achieve with students who have identified with the underlying values of information literacy, have been fully engaged in learning how to become information literate and who develop a lasting interest in being and growing as such, just like climbers. To fully engage students and arouse a lasting commitment to this endeavor, I therefore suggest stepping out of traditional educational approaches and looking to research on adventure, danger and interest. These are separate but related concepts that involve psychological mechanisms that thoroughly engage us, sometimes for life. So, the remainder of this article will be a reflection on what adventure, danger and interest are, and how they could be used to renew our thinking about IL teaching.

Adventure

In a recent summary of how adventure is defined and used by researchers and practitioners in the field, Dahl (2016) identified six core qualities. For each quality, consider how adventure-attuned your approach to information literacy teaching may currently be and where you think it might be interesting to expand that.

Adventure is situated. This means that adventure is embodied, takes place in a particular time and space, and often with others (see, for example, Bott, 2015; Rickly & Vidon, 2017). Sometimes, this situatedness can be demanding, as in the example of outdoor adventures. Nevertheless, awe-inspiring settings put the overall experience in perspective (Hopkins & Putnam, 2013). Accordingly, adventure experiences are often more "vivid" to us than the activities in our everyday lives (Swarbrooke et al., 2003) in part because of how sensory-rich they are. And vividness has value, as Allan Paivio (2007), in his dual coding theory work, has taught us. Engaging multiple senses in the learning process positively influences what we remember from our experiences later.

Adventure varies in how soft and hard the experiences are. Though both can be thrilling, what distinguishes the hard from the soft is how much (1) the activity poses objective dangers to the participants, (2) participants must have certain knowledge and skills to participate, and (3) the experience is facilitated by others (see, for example, Hill, 1995; Pomfret, 2006; Próchnia, 2020; Rantala et al., 2018). In soft adventure, any dangers, like those associations with riding on a crazy roller coaster, are taken care of by somebody else. Also, it takes only just-enough skill from us to be able to join in. That way, we can feel the thrill of rapid speed and stomach-churning drops without the fear of injury or death, thanks to the precautions taken by the roller coaster builders and service people. In hard adventure, on the other hand, objective dangers in activities like back-country skiing are real – like the possibility of injury, or even death. The

harder the adventure, the more knowledge and skill are required of the participants themselves, especially since participants in hard adventure are more responsible for carrying out the activity on their own, often without a guide. So, in soft adventures, others look out for our safety, while in hard adventures, we have to look out for our own. More about danger in a bit.

Adventure is characterized by acts of exploration, discovery and insight. This is a kind of playful cognitive engagement that supports growth (Swarbrooke et al., 2003). It's a deliberate pursuit of something novel or mysterious about ourselves, others or the world around us, and it builds competence. Discoveries and insights that we find useful, meaningful or important to us are important aspects of staying interested and involved in an otherwise challenging activity (e.g., Hidi & Renninger, 2006; O'Keefe & Linnenbrink-Garcia, 2014; Rotgans, 2015). Furthermore, they can contribute to character training (Hopkins & Putnam, 2013).

Adventure is emotionally charged, fueled by intense feelings, flow and interest. By posing us with challenges, adventure arouses and emotionally engages us, with the possibility of evoking intense feelings of enjoyment and happiness or sadness, fear and dread (see Hetland et al., 2018; Houge Mackenzie & Kerr, 2012). The arousal part of that feeling is the body's visceral reaction to facing uncertainty (Goldstein, 1987), while the affective experience of the arousal is our subsequent interpretation of it, linking it to, for example, anxiety or excitement (Apter, 2007). The intensity of the feeling is an important part of the overall adventure experience (Hopkins & Putnam, 2013) and can even become addictive (Buckley, 2015). In a study from 2003 (as referenced in Breivik, 2007), nearly half of Norwegians over 15 years of age said they would take on big challenges to get what they want out of life, with 14% of them claiming they would do things that were dangerous or forbidden just to experience something exciting. This supports other research that has shown that we are born with certain dispositions for sensation-seeking, though our appetite for thrills, sensation-seeking and risk may be even greater when living in environments where we feel safe (Lee & Andrade, 2015).

Adventure is also often associated with feelings of flow that occur when, among other things, the degree of challenge (or arousal) matches, or slightly exceeds, our sense of competence (Houge Mackenzie & Brymer, 2020; Houge Mackenzie et al., 2011, 2013). When in that flow state, we tend to feel a sense of total concentration, "oneness" with the task and loss of time and self-consciousness (Boudreau et al. 2020; Nakamura & Csikszentmihalyi, 2014). It's a feeling we find engrossing.

Finally, a well-developed interest in adventure activities is what keeps us returning to them and incorporating them into our identity or as a part of our lifestyle – at least for a while (see, for example, Ekeland & Dahl, 2016; Gilchrist & Wheaton, 2016; Green et al., 2015; McAvoy et al., 1989). I'll provide a longer explanation of how interest works later.

Adventure is personally challenging, sometimes even dangerous. As varied as adventure activities are, what they all share is some opportunity for challenge. In some cases, those challenges are tied to real risk – sometimes physical, sometimes more abstract, uncertain outcomes (Houge Mackenzie et al., 2011, p. 521). A challenge grabs our attention and sparks

interest. Meanwhile, the way we typically design our teaching is relatively safe. Even though students may experience safe learning as more educational than challenging learning, there is evidence that it may very well not always be (Deslauriers et al., 2019).

Successful adventures are rewarded through mastery and pleasure. When deep into our tasks, we may not be as emotionally pre-occupied or aware because of the attention our body has to pay to other things when highly aroused and eudaimonically engaged (Hetland et al., 2018; Thorsteinsen & Vittersø, 2018). However, when we finish, how successful we have been can lead to a wide range of pleasure-related feelings like joy, pride, enthusiasm and gratitude or, if not successful, to regret, sadness, anger or fear (see, for example, Alvestad & Johansen, 2020; Vittersø 2016).

These qualities of adventure offer fruitful points of departure for how to make learning more involving and learning rich for students. They point to the importance of being aware of, and actively working with, (1) how situated your teaching is and making it more sensory-rich or vivid, (2) what makes a learning situation soft or hard for students, and when it is appropriate to work in soft or hard ways given the students' skill and readiness to take on risk, (3) the creation of learning opportunities that involve opportunities for authentic challenge and discovery, (4) emotionally engaging and interesting material and activities, and (5) in zones where students experience danger and work deliberately with that. In so doing, we can increase the chance of learner efforts (6) being rewarded with mastery and pleasure.

More specifically, consider seeking out vivid content and create sensory-rich experiences (using movement, sounds, smells, tactile and visual experiences) that can help make the content more memorable. To create softer and harder adventure opportunities with the opportunities for pleasure and flow, match activities and the time you give to them, to the skills and knowledge that students have to successfully, but with some effort, do the work. Vary the levels of challenges by raising and lowering the stakes as appropriate (sharing work with peers or public speaking are two examples that raise stakes, though the thrill of successful completion yields pleasant feelings of mastery). When needed, give students room to more softly explore in creative ways without the pressure of public scrutiny or graded achievement. Base tasks on new (at least to the student) or heretofore unsolved challenges for authenticity. Whatever we do, let's encourage the fun of exploration and discovery when teaching our students new skills rather than showing and telling them things we then want them to show and tell back to us. Create enough feedback loops to assure that adventurous efforts, even those that may not feel good at the time, are rewarded with feelings of pleasure and regular experiences of mastery that build confidence.

Danger

What dangers might we meet while becoming information literate? Even in serious and playful adventures, remember that a sense of danger (or risk) is also an important part of feeling aroused during an adventure. There are two main kinds of danger related to being or becoming information literate. They are tied to issues of trust and integrity – two qualities that touch on

information and information management and on people.

Dangers related to information and information management appear in a landscape where the available information varies wildly in its source accessibility and credibility, the content's veracity, and the potential impact of its use or misuse. Managing it well can be challenged when sources are difficult to find or appear to be something they are not, when the truth content is hard to discern, and when people misunderstand and misrepresent it, or even deliberately use it to mislead people (Pérez-Rosas et al., 2018; Zhou & Zafarani, 2021). Disingenuous scientific publications, conspiracy theorists, publications that publish both serious journalism and misinformation, and worse yet – respectable but inadvertent propagators of false information all introduce trust and integrity traps.

Dangers related to people touch on how information can also rock the foundations of the way we understand the world. For that reason, Geoff Walton (2017) has gone so far as to label information literacy work as a subversive activity related to pushing the boundaries of what we currently know or think to be true. That involves punching through barriers like our worldview, confirmation bias, motivated reasoning and epistemic beliefs – all knowledge factors that can cloud our judgement about an information source or information credibility. Also, misunderstanding and mismanaging information can lead to poor learning, low grades, sanctions as serious as being academically suspended or expelled, or losing one's job or professional licensure. These kinds of experiences are often laced with feelings of frustration, low self-efficacy, fear or even shame – yet other forms of trust and integrity traps.

Therefore, the benefits of managing the dangers inherent in the constant flow of information are beneficial to students' academic work, but also to their work and in daily life long after they move on. Alarmingly, research indicates that people nevertheless misconstrue and mismanage information daily. What is it that trips us up when it comes to determining whether information comes from a reliable source or makes a reliable claim worth sharing – even in our everyday lives? Consider these examples.

The ubiquity of titillating sharing. In a study of how true and false information flourishes online in Twitter feeds, Vosoughi, Roy and Araï (2018) analyzed 126,000 stories tweeted by approximately 3 million people more than 4.5 million times from 2006 to 2017, using six independent fact-checking organizations. Each of these stories was judged to be true, false or mixed, with a level of agreement spanning 95-98%. These stories were then analyzed using several measures of "reach" (or "news cascades") that captured how many people the stories were retweeted by in various ways.

Overall, they found false stories "diffused significantly farther, faster, deeper and more broadly than the truth" (Vosoughi, Roy and Araï, 2018, p. 1147). More specifically, false stories were 70% more likely to be retweeted than true stories and thus reached significantly more people. For example, whereas true stories "rarely diffused to more than 1000 people, the top 1% of false-news cascades routinely diffused to between 1000 and 100,000 people" (p. 1148). Also, it took true stories six times longer than false stories to reach just 1500 people. In terms of content, compared to false stories about terrorism, natural disasters, science, urban legends and financial information, false political stories were most viral (followed by urban legends).

The retweeted true stories simply didn't have the same effect or reach.

And these false news propagators are not necessarily Twitter sharks. Indeed, the spreaders of false stories tended to be newer to Twitter. They followed significantly fewer others, and they were followed by significantly fewer others. In other words, you don't have to be particularly connected to make a big splash.

What made the false stories so insidious? Vosoughi, Roy and Araï (2018) argue that novelty is the culprit. Novelty surprises us, and in the case of tweets of false stories, the surprise is significantly related to information that is judged to be unique and different from previous news, often associated with feelings of disgust, thereby increasing people's desire to act in information-sharing ways while at the same time signaling that they are "in-the-know" to others.

Bypassing reason. Why do we fall for these false stories? Contrary to other research and how many others think, Pennycook and Rand (2019) argue that our political biases are not at the core of the matter. Regardless of whether a story is concordant or discordant with our political leanings or values, we can be equally good at assessing whether they are true or false – that is, if we go beyond our immediate intuition and actually pause to judiciously analyze the content.

Pennycook and Rand (2019) showed this in their US study where they asked over 3000 participants in three studies to evaluate fact accuracy for a series of news stories that were either false or true. An equal number of stories were ideologically more attractive for Democrats, for Republicans or, in one study, ideologically neutral. The more analytical participants were, the better they were at discerning false from true stories – regardless of whether the story was concordant or discordant with their own political ideologies. Pennycook and Rand summarized that when "people fall for fake news [it's] because they fail to think; not because they think in a motivated or identity-protective way" (p. 48).

Knowing how to reason about the truth of information should trump our lazy inclination to just respond to information intuitively. Perhaps just activating people's need to think critically is enough. However, Lisa Fazio (2020) warns us that it's not that easy. Building on Pennycook and colleagues' work (Pennycook, Cannon & Rand, 2018), Fazio presented 24 headlines (each with a photo and byline) to 501 US participants and asked them to assess which of the headlines they would likely share on Facebook. Twelve of the headlines were true and the other twelve were false. In the control condition, half of the participants were presented with the headlines and asked (1) to rate each one for how interesting they found it, and then (2) how likely it was that they would share it online. In the explain condition, participants did the same, only they were also asked to explain, before rating how likely they were to share it, how they knew if the headline were true or false. Fifty-seven percent of the folks in the control group said they would likely share one or more of the 12 false headlines, and 24% said it was extremely likely. Meanwhile, 39% of the folks in the in the explanation group also said they would likely share one or more of the 12 false headlines, and 17% said it was extremely likely. Also, for both groups, the headlines that were new to them were more likely to be shared than those they'd seen before (there's that novelty factor again).

So, although we can mitigate our draw to share false information with reasoning,

reasoning alone is not enough. Even when we critically assess false information, we can still be inclined to share it.

Fazio did not report the relationship between how interesting people found the headlines and their likelihood to share them, however, so the role of interest in this work remains unclear. Still, it's old news in reading research that text with tantalizing details can seduce us away from a text's main idea (Garner et al., 1989; Lehman et al., 2007). It is therefore reasonable to assume that the headlines participants found more interesting were more likely candidates for sharing than the less interesting ones.

Relevance for academic work. Of course, finding, assessing and sharing information in our social media world and finding, assessing and sharing information in the academic world are not one and the same thing. In the world of social media, in addition to dealing with information that (1) informs "truths" and (2) signals group membership, we also use information to (3) entertain (Fazio, 2020). The degree to which those three different motivators influence the information we share in our private lives and in our academic work is still ripe for research. Nevertheless, the basic principles behind information savvy are relevant for how our students approach any information throughout their lifetimes (e.g., Ilett, 2019; Tamilchelvi & Senthilnathan, 2013).

The key is knowing how and when to use IL skills at different decision points – like when we determine the truth value of information in terms of its source, its content, and in terms of what is judicious to share (Eisenberg, 2008). These skills are as relevant for sharing a Tweet or Facebook post as they are for finding, assessing and sharing academically sound information, and information that otherwise helps us in our daily lives (e.g., Head et al., 2013).

So there are real dangers out there. Some arise when we suspend our source critique, when content novelty clouds our judgement, or when we simply use the information incorrectly, with or without malice. Information literacy skills can prepare us to take on and successfully manage those hazards. But will learners fully value that without testing them on a good challenge like we would on a good adventure? What are the qualities of danger that makes it so alluring in adventure?

The allure of danger in adventure

The qualitative appeal of adventure comes from the relatively pleasant intensity of the experiences – a byproduct of balancing high arousal that comes from facing hazards (the dangerous, uncertain or unknown) with a desire to enjoy or master it (Buckley, 2012).

Building on a metaphor Apter (2007) once introduced, imagine yourself in a place with a tiger (a danger) and/or a cage (a safety frame). When there with just you and the empty cage, your body will likely experience no arousal, and, most likely, you will feel bored. On the other hand, when there with just you and an approaching tiger, your body will likely experience intense arousal, and very likely, you will feel highly anxious. Now imagine, the tiger in the cage and you right outside it. As the tiger approaches you, that same cage and tiger become a very different experience for you. With the safety of the cage between you and the dangerous tiger, not only might the approaching tiger feel manageable, the danger of getting quite close to it has

been significantly reduced. Even if you could smell the tiger, sense its movement and feel it's breath, your chances of interpreting that as intensely exciting are considerably greater than as intensely anxiety-provoking. That's because the safety of the cage provides you with a confidence frame that makes being near the tiger doable for you. With the help of that frame, the arousal you feel can be reversed from the anxiety you felt when there was no cage to excitement when there was.

In this metaphor, the tiger represents dangers, real or imagined, that we might face when highly aroused and feeling anxious. We can reverse that feeling with a cage that represents the confidence frame that we can build in order to be able to approach and handle the danger with confidence, turning anxiety to excitement. After all, we like feeling excited. Engaging in activities that arouse us is something we even crave. However, that depends on whether we feel protected enough to feel sufficiently safe to manage the situation. If we don't, we will remain anxious.

Arousal. It's arousal that makes things feel intense through the activation of one of two competing systems in our body that regulate all our vital involuntary and reflexive functions: the sympathetic system (fight or flight) and the parasympathetic system (rest and digest) (Apter, 2007; Goldstein, 1987). When confronted with a potential threat like a big challenge or risk, the sympathetic system kicks in to protect us, quelling the parasympathetic system.

The sympathetic system then puts all physiological hands on deck to prepare us to cope with the danger. In particularly intense situations, in order to get sufficient oxygen out to the muscles that our body perceives we'll need, it'll get us to breathe faster and deeper and get our heart beating more vigorously. It'll get us perspiring to keep the body cool and dilate our eyes for better visual acuity. Adrenaline will pump into our body to give us the power to sustain action longer, if we need it, while the reticular activating system in the brain stem also prepares our brain to be alert and active. None of this is emotional; it is simply what the body does physiologically to take on a perceived challenge or risk. How we actually experience that arousal emotionally depends on whether we interpret it as pleasant or unpleasant, in part through how able we feel to manage it.

Zones of danger and delight. In our everyday, we move around from experience to experience in "zones" that vary in how safe or dangerous they are or feel to us (Apter, 2007). The trauma zone is the zone where real danger lurks, where serious physical or psychological harm is possible. We don't often go there, although people engaged in hard adventure like to hang out nearby. Bordering the trauma zone is the danger zone. This is where lots of adventures take place, with hard adventure closer to the slippery slope of the trauma zone and soft adventure further away. Bordering the danger zone is the safety zone where the chance of encountering any real danger is minimal. This is where more benign soft adventures take place. As we move around this landscape of experiences, we can regulate how much arousal we want to feel. If we want more, we can move in excitement-seeking ways closer to the trauma zone. If we want less, we can move in anxiety-avoidant ways away from the trauma zone.

Protective frames. We choose our adventures that way, too, depending on how much arousal

we are up for. In order to feel comfortable as we move in and out of these zones, we develop protections, or "frames" to keep us safe (Apter, 2007). These frames might involve personal knowledge and skills, adaptive tools, or necessary help from others.

The detachment frame keeps us furthest away from the trauma zone (Apter, 2007). Think of it as the black screen and muted microphone in a digital meeting. When using that frame, we can still experience some excitement – though it occurs more vicariously through observation, imagination or fantasy. The safety frame allows us to move around in the safety zone and parts of the danger zone where no immediate dangers are close by. This is often where we find ourselves when we want to have fun, play games or enjoy humor without any real consequence. Finally, the confidence frame allows us to use our knowledge and skills, tools and other resources to actively navigate the danger zone. With a well-developed confidence frame, we can move ourselves in excitement-seeking ways quite close to the edge of the trauma zone and flirt with dangers, real or perceived. Though close to dangers, with a sufficiently developed confidence frame, we feel competent enough to stay right on the edge of the trauma zone, at once aroused by the danger, yet able to manage it without any serious or lasting consequence (like when hanging out with a caged tiger).

You could think of information literacy as a kind of protective frame relevant for pursuing "the great unknown" or managing the truth and integrity traps of information management. Helping students develop this kind of confidence frame to manage not only simple, straightforward information tasks, but also the complex and ambiguous information tasks that potentially are more "dangerous" or have more dire consequences if mismanaged, opens the door to exciting adventures where we feel aroused yet safe enough for that to feel pleasant. We relish those kinds of alluring and absorbing experiences.

Here are some ideas for how to capitalize on this. Acknowledge and explore where there are actual dangers, what kind they are, and their potential consequences. Watch films or videos or share articles detailing where dangers have lurked and been poorly managed. Prepare students to take some of them on directly. Identify what kinds of competences they would need in their confidence frames in order to not fall into IL traps. For information and information management issues, have students test themselves on real cases, assessing whether they can confirm, find gaps in, or debunk others' work. In their own work, have students do and share work with others on progressively higher stakes problems as they grow in their IL abilities.

Lasting interest in being information literate

Interest makes taking on the dangers of becoming information literate and managing challenging information something we want. It is powerful, because it focuses our attention and facilitates learning even when we're not working towards particular learning goals. It is like a "relevance detector" (Scherer, 2005) that sets in motion curiosity-driven behaviors (Silvia, 2006; Oatley et al., 2019) towards particular "somethings". When triggered, it catches and holds our attention (Hidi and Baird, 1986) and can regulate emotionally engaged interactions with any target object of interest.

In early work on interest, Roger Schank (1978) identified powerful topics that naturally

catch our attention and trigger interest, in spite of ourselves. These include death, unexpected events, danger, power, sex, money ("in large quantities", he adds, p. 15), destruction, chaos, romance, disease, irony, and dilemmas – all topics that can be used in IL instruction. Though these might easily catch us in the moment, if the catch is primarily situation-dependent, the interest may not hold. To convert that situation-dependent interest into something that lasts and that people pursue on their own, something has to happen to make that interest personal. So, rather than guiding students to become interested in information literacy per se, why not nurture their interest in being (or becoming) an active and growing information literate person?

The 4-phase model of interest development. Suzanne Hidi and Ann Renninger's (2006) 4-phase model of interest development explains how interest may evolve (or devolve) along a continuum that is more situation-driven in the early stages of interest development, and more self-driven once an interest has established itself.

In the first phase, the interest is triggered by the situation and may or may not last, while in the second phase, the interest starts to feel more relevant, and we gladly re-engage with it if the situation supports that. In the third and fourth phases, the tables turn as the object of interest becomes personal. We ourselves seek out the interest -- first with a little help (phase 3) and eventually on our own (phase 4).

The main ingredients that drive us from one phase to the next are positive emotion, feelings of competence and of meaningfulness (Dahl & Nierenberg, 2021; Ekeland & Dahl, 2016; Hidi & Renninger, 2006). These three ingredients play different roles at different points along the interest development continuum.

When we first meet an object of interest, for example, strong emotions are often the most powerful ingredients for arousing our interest. When we are surprised, or angered, titillated, or thrilled, the emotion gets our attention (hence the power of Schank's death, danger, and dilemmas). In order for an interest to be sustained, though, it must take on an emotionally positive quality (Hidi & Renninger, 2006). At this early point in interest development, our sense of competence and feeling of meaningfulness, in relation to the object of interest, are less important (Dahl & Nierenberg, 2021). At each phase thereafter, though, the relevance of the three main ingredients shift, making each phase qualitatively different from the others. So, for example, meaningfulness is no big deal in phase 1, but it is the biggest deal by phase 4. Positive affect is perhaps most important initially, though increases moderately in subsequent phases. The value of becoming more competent in interest-related ways starts kicking in by phase 2 and continues to grow together with positive affect in phases 3 and 4. In sum, positive emotion's a must. Feeling like we're learning something we find relevant keeps us on the line. And when something becomes personally meaningful to us, we're hooked.

To move students from a situationally dependent to personally driven interest, start with emotionally engaging work, help learners see the relevance of their learning in general, and the value of having the skill to make the competence of being or becoming information literate personally relevant and ultimately personally meaningful for them via something they really, really care about. Lift the development of IL competencies to being a part of one's way of life rather simply an academic skill. To arouse positive feelings, especially in the beginning, link

IL to intriguing stories where competent IL practices make an obvious difference. To maintain those positive feelings, help students build feelings of efficacy as an information literate person. To develop feelings of competence, help students master the content and skills necessary to be an information literate person in low stakes ways (engaging assignments that facilitate success, peer collaboration to help them develop a critical eye and understand how to use others when assessing the quality of their work, ungraded assignments to solidly build skills before grades are introduced) such that when you lead them to high stakes situations, they feel ready to manage them with excitement confidence.

Stealth teaching. Where interest in becoming information literate doesn't already exist, consider stealth teaching – an approach also used in the gaming world where designers create stealthy learning opportunities that don't interrupt the fun or play aspect of gaming experience yet draw people in (Bopp, 2006; Towhidneiad et al., 2014). From an interest development perspective, stealth teaching involves deliberately meeting skeptics where they are at and surreptitiously helping them develop an interest in something they hadn't yet imagined as interesting, and eventually leaving them wanting to engage with it so much more that they start seeking out opportunities to pursue it on their own.

Tigers

So, let's throw our learners out to the tigers! Have them embark on both soft and hard IL adventures that are emotionally engaging, put their integrity on the line, give them challenges to genuinely hunt for the hard-to-find or unknown, that expose scheisters, or find something no one else has seen before, then force them to make razor sharp judgements about what they find and confidently assess its truth value. Along the way, help them become more competent seekers of answers to questions they sincerely long to find the answers to, and where the pleasure of the story they tell in the end lies in how true, convincing and compelling it is for those who receive it. Because there will always be more that we don't know than we'll ever know, as Gudmund Hernes said, and something new will always be there to discover as Freeman Dyson said before him. If the greatest of all in our business is the unknown, the great hunt for knowledge, and our careful management of that, will never end.

Why not make the pursuit of the great unknown an adventure?

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