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Ignite WCSE: Sparking Interest and Kindling a Passion in Science Education

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Ignite WCSE: Sparking Interest and Kindling a Passion in Science Education

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Abstract

The Western Conference on Science Education (WCSE) opened with a unique event at which twelve colleagues presented short, structured PowerPoint talks in the Ignite format. This paper describes the organization of the IgniteWCSE event, provides weblinks to the individual talks presented that night, and offers suggestions for those considering how to incorporate similar rapid-fire talks into their teaching and presentation portfolios.

Introduction

Science Educators engage audiences in a diverse array of settings, ranging from undergraduates in the traditional classroom, to lay audiences at public-speaking events and patients in the healthcare setting. In these various contexts, the ability to connect with an audience and relate complex subjects in a finite timeframe can be a successful teaching technique. This year, we kicked off the Western Conference on Science Education (WCSE) in the true spirit of the conference's mantra of "Gather + Create + Improve." We *gathered* at an opening mixer that featured twelve speakers, each of whom *created* and presented rapid-fire "Ignite" talks that focused on Science Education (see Figure 1 for Ignite WCSE logo). Our objective was to showcase to our colleagues how new instructional techniques such as Ignite talks could *improve* student engagement in the context of Science Education.

This brief report paper includes descriptions of the preparation and execution of the IgniteWCSE event, as well as an online [weblink](#) to the Ignite talks, as these presentations were recorded live that evening and video archived. Our experiences in organizing and delivering this successful Ignite event are presented for others to consider when incorporating lightning talks in their own pedagogy.



Figure 1. Logo of the Ignite WCSE event.

What are Lightning Talks in General and Ignite Talks Specifically?

University lectures are increasingly augmented by the use of PowerPoint presentations that offer a medium that permits the effortless inclusion of visuals, videos, and sound (Johnson, 2012). However, the ease of use permitted by PowerPoint does not

necessarily translate into enhanced student learning, and the impact of this learning tool remains unresolved (Klentzin, Bounds Paladino, Johnston, & Devine, 2010). An evolving style utilizing the PowerPoint format has been the so-called “lightning talk” which uses a rigid format involving a fixed number of slides presented quickly and automatically (Levin & Peterson, 2013). Two primary forms of lightning talks have emerged. Pecha Kucha (Japanese for “chit-chat”) was created in 2003 and employs a fixed presentation displaying 20 slides with 20 seconds allowed per slide (pechakucha.org). The potential advantages in using Pecha Kucha as a pedagogical technique have been reviewed (Johnson, 2012; Klentzin et al., 2010). In addition to Pecha Kucha, Ignite talks began in 2006 and are self-described by that organization as a “geek event in over 100 cities worldwide, at which Ignite presenters share their personal and professional passions” (igniteshow.com). These talks utilize a 20 slide / 15 seconds per slide, auto-advance delivery method. Online support and information on Ignite talks can be accessed (igniteshow.com/howto) to assist in the planning, promotion and production of an Ignite event. The inherent advantages of each of these presentation styles, for both presenter and audience, include the accessibility and familiarity of PowerPoint as a presentation medium, as well as the timing constraints that permit an event in which multiple rapid-fire reports can easily be presented during the 1-2 hours defined by a lecture period or in a social context. Such was the case for our Ignite evening (IgniteWCSE), at which seven faculty and five undergraduate students accepted the challenge of igniting the audience in this exciting, challenging and informative format.

Recruitment of Ignite Participants

A subcommittee of WCSE organizers initially identified a number of respected colleagues in the field of Science Education whom we felt would participate in the Ignite event and would use the format to capture the tone of the conference. These colleagues included both faculty members and senior undergraduate students. Some, but not all, of the presenters were familiar with the Ignite presentation format. An introductory email request to participate was sent to the potential speakers, and was followed by a detailed email that provided the rationale for the evening (summarized above), information regarding the Ignite format, and internet resources with video examples of Ignite talks (igniteshow.com). We also provided the speakers with a short list of hints and suggestions for successful talks gleaned from experienced Ignite speakers and Internet resources. One critical component for the speakers was to ensure that our Igniters were comfortable with the topic on which they were speaking and did not feel constrained by content. This was a particular concern, given that most speakers were new to the unique constraints provided by the Ignite format itself. Hence, we informed speakers of the general theme of the night (i.e. Science Education) and provided latitude for the speakers to “talk about recent experiences, interesting ideas, or catching bugs when you were four years old.” We also stressed in our instructions to presenters that “any topic linked back to the theme will be welcome.” We felt it important to convey to the speakers the duality of the evening as an enjoyable event, as well as an informative one that would successfully launch our conference.

The Ignite Event

IgniteWCSE was held at The Wave restaurant at Western University on the evening

prior to the start of WCSE. A complete list of the IgniteWCSE presenters and the titles of their talks is presented below. A [weblink](#) to an archived video of the event is provided and we have included direct hyperlinks to the start of each of the individual Ignite talks at the end of this extended abstract. The scope of the Ignite talks was diverse and ranged from specific areas of scientific content, to professional experiences within the classroom, to relating new tools and approaches to undergraduate and graduate teaching. Anecdotal discussions with presenters following the event revealed common reflections about their involvement. These included the initial excitement related to their participation in the event as well the realization that the fixed structure of the slides/timing of slides presented a challenging new paradigm in preparing such a presentation. In particular, this challenge related to the need for extensive practice time to fine-tune the Ignite talk so that the essence of the topic could be clearly and effectively communicated in such a restricted time frame. As well, the presenters felt that they had improved their own preparation and presentation skills in this rapid format setting and many said they would now include this Ignite tool in their teaching toolkit. Unsolicited comments from conference attendees following the talks, and subsequently throughout the conference, indicated that the attendees were rewarded with an entertaining and informative set of presentations that provided concrete examples of the power of Ignite talks to coalesce teaching points in a finite timeframe. Overall, our IgniteWCSE event provided a relevant educational experience for presenters and audience alike, and exposed us to a novel presentation format in the context of an “appetizer” that whet the appetite of WCSE attendees and engaged them prior to the official start of our conference.

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Appendix A

The Ignite Presenters and their Ignite talks:

Click on the linked title to go to the specific Ignite talk video.

David I. Rodenhiser

Associate Professor, Paediatrics, Biochemistry and Oncology, Western University

[00:01 'Deconstructing Epigenetics for the non-science audience'](#)

Ylonna Kurtzke

Undergraduate Biology student, Summer Fellow, Western University

[06:40 'University Diversity: Universal Design as More than a Mandate'](#)

Mohammed Jay

Undergraduate IMS student, Western University

[11:55 'Importance of an Interdisciplinary approach to education in science'](#)

Simon Bates

Senior Advisor Teaching and Learning: Academic Director, Centre for Teaching, Learning & Technology, University of British Columbia

[18:00 '3 ways to close the gap with your students'](#)

Dan Thomas

Associate Professor and Associate Chair, Department of Chemistry and Director, Physical Science and Engineering Education Research (PSEER) Centre, University of Guelph

[23:58 'What will be on the exam?'](#)

Weige (Charlie) Zhao

Undergraduate Bioinformatics Computer Sciences student, Western University

[30:00 'What we can learn from a student-run extracurricular project: the Undergraduate Science Case Competition'](#)

Colin Montpetit

Assistant Professor, Department of Biology, University of Ottawa

[35:25 'French Kissing Concept Inventories'](#)

Nida Shah

Undergraduate HBS student, Western University

[41:40 'Video Games'](#)

Peter White

Department of Entomology Michigan State University

[47:25 'Noah's Ark: Helping Evolution and Creationism find common ground'](#)

Adam Faller

Undergraduate Biology student, Western University

[53:08 'Building the Network'](#)

Leslie Reid

Associate Dean, Teaching and Learning, Faculty of Science Teaching Professor, Department of Geoscience, University of Calgary, Alberta.

[58:40 'Power in the classroom'](#)

Tom Haffie

3M National Teaching Fellow, Faculty of Science, Western University

[1:05:05 'Some days, I can't decide whether to live my life as a role model for others, or as a cautionary tale.'](#)