Com PAIR

An online tool adding the power of comparing to review of peer work

ComPAIR is a peer review application developed by the University of British Columbia & freely available for anyone to download, install & use. ComPAIR distinguishes itself from other peer review tools by harnessing students' innate ability to compare. Rather than have students evaluate one work at a time, ComPAIR presents **paired sets of peer work** for comparison-based review & feedback.

What makes ComPAIR a good solution to the challenges inherent to peer review?

ComPAIR applies Thurstone's Law of Comparative Judgement (1927): human beings are better at comparing two things than evaluating one in isolation. This addresses the following challenges.

Challenge #1: Instructors want to include peer review as an active learning strategy, but not at the expense of setting aside significant class time for handling review logistics & training.

ComPAIR minimizes the time required to set up peer review In ComPAIR, student work is easily collected & distributed automatically online for anonymous peer review. Instructors can train students in part or in full with the detailed custom criteria they set for comparing.

Challenge #2: Even with training, students as novice evaluators may not feel confident in reviewing each other's work or writing quality constructive peer feedback.
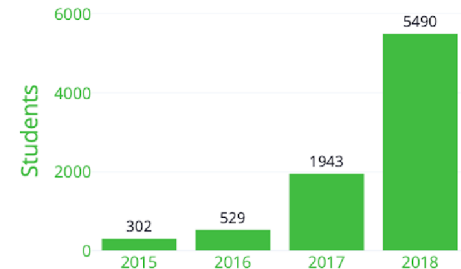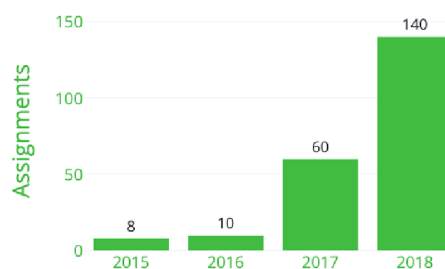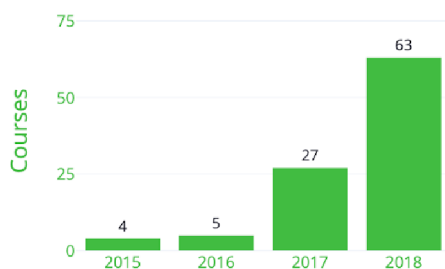
ComPAIR gives students reference points when evaluating Because ComPAIR shows peer work in pairs, students can tap into their natural skill of comparative judgement to identify strengths, weaknesses & constructive criticism of other work & reflect on their own.

Impact: How can we quantify ComPAIR's successes so far?

○ **Initial investment:** a modest **$53K** Teaching Learning Enhancement Fund grant through UBC's Centre for Teaching, Learning & Technology (CTLT) kicked off development in 2014.

○ **Usage since 2014:** at UBC, ComPAIR adoption has grown to **60+** courses hosting **140** assignments impacting **5400+** students in 2018.

○ **Ongoing collaboration:** a collaboration from the start, ComPAIR has been **invaluable** in fostering relationships among UBC instructors, students, researchers & technology experts, while creating a stronger learning tool. CTLT hosts a working group attended by **5-10** instructors & has facilitated **8** research & evaluation projects, **2** cross-discipline qualitative studies & usability testing with **100+** students.

○ **Usability:** students find ComPAIR easy to learn & use. In a 2018/19 study, roughly **70%** of students surveyed across a sample of **8** UBC courses rated it with high usability on first use & this increased to **92%** after they became more familiar.

○ **Student reception:** English & Physics student surveys in 2016 revealed a **majority** of UBC students in both disciplines felt ComPAIR benefited abilities to evaluate their own (68% & 74%) & other answers (72% & 89%) & give future peer feedback (68% & 84%). Despite still being in beta, **88%** & **84%** of these students reported an overall positive experience with the tool, respectively.

○ **Student impact:** in UBC term-end course evaluations, students are asked to name the assignment(s) most valuable for their learning (answering in an open-ended text box). For one UBC English course, starting in 2015, **40%** of those replying listed ComPAIR as or among the most valuable & this has since increased to **58%** (2016), **73%** (2017) & **65%** (2018).

○ **Affordability:** as a scalable, open-source tool released using GitHub & a GPL-3.0 license, ComPAIR costs **$0** for UBC & other institutions to download, with no student caps or fees for use; the only cost is the local technology infrastructure to host an installation of the code. ComPAIR is also IMS & LTI certified, making it simple, efficient & cost-effective to run with any LTI-compatible platform.