PeerMark Research

Business Case for PeerMark 2.0, June – August 2021

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Non-disclosure agreement: To respect NDA policies, certain information and data has been omitted or blocked off from this presentation. Instead, I will explain the processes taken place in this research. Certain information included is also available to the public, on the company's website.

Overview

- Turnitin's Mission, Strategy, Vision

- Peer Review Industry

- Goals / Research questions

- PeerMark today

  - PeerMark life cycle

  - Where PeerMark lies in Feedback Studio

  - Total addressable market

- Understanding the peer review cycle in group work

- Total Addressable Market

  - Consumers, prospects, growth

- Competitors

  - Features matrix

- MVP Recommendations

Turnitin Mission

To ensure the integrity of global education and meaningfully improve learning outcomes.

Strategy

Turnitin becomes the definitive global leader in integrity and assessment.

We lead the market with a modern, end-to-end assessment platform that helps ensure integrity and fairness is the foundation of every assignment and assessment.

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PeerMark Vision / Instructor Experience Vision

- Improve instructor's class environment through building a culture of ownership, empowerment & exploration

PeerMark Vision / Student Experience Vision

- Empower students with insights and guidance to improve their learning outcomes through engaging in peer reviewing assignments

- Support students to become critical thinkers and better at self reflection

- Create a mental shift in students to write with a larger scope

Based off the company's mission and strategy, I created a vision that'll align with the company's goal, leading to progression.

Goals/Research Questions

- Understand what is or is not working for users in the current version of PeerMark?

- What do instructors see as the real or potential benefits for themselves and their students using PeerMark?

- What do instructors want to understand about their students regarding their work and understanding in the Peer Review Process?

- How do we get customers to activate/adopt Draft Coach and promote its usage?

- How do we get students to find value in and consistently want to use PeerMark?

- How do we enhance insights into PeerMark usage/data for instructors?

- How do we get every student to use PeerMark(or student experience) and use it to improve their learning outcomes?
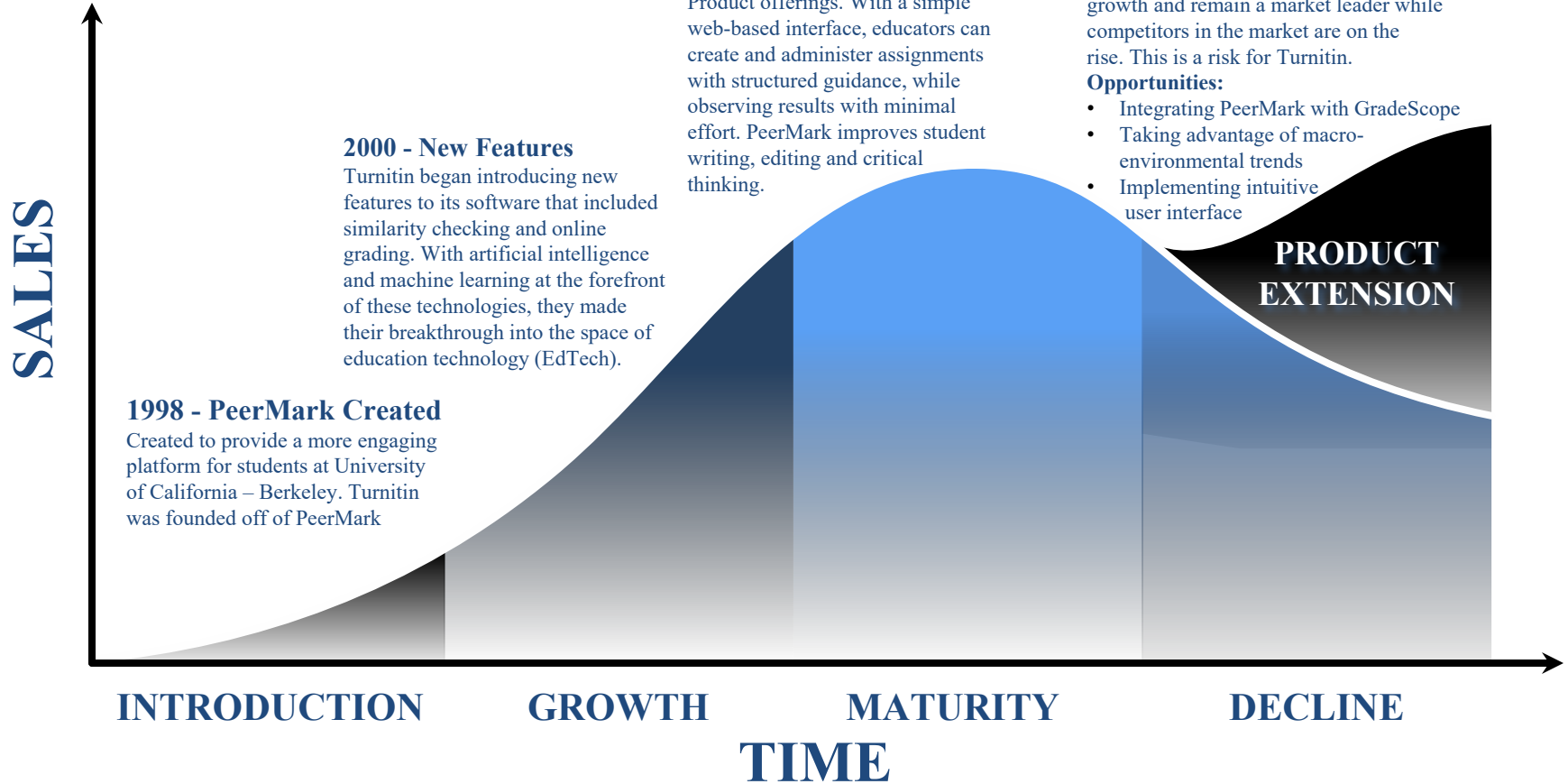
Peer Review Industry

Peer Review is the process where students review other students' work and provide feedback on it (JISC). In this process 2 important phases can be seen; student receiving, and student giving. While students are giving feedback, they become engaged in the process of making academic judgements for themselves.

Through various research studies and instructor testimonials, it is seen that peer review fosters critical thinking and promotes self-reflexivity. These skills encourages students to reflect on their work based on assignment criteria and learning outcomes.
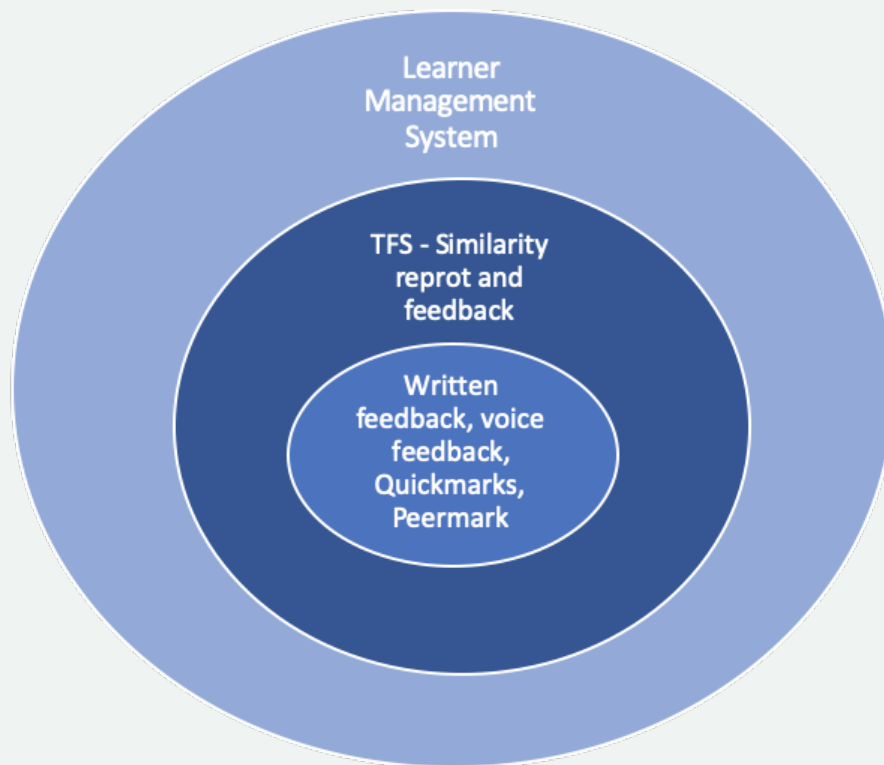

- Engaging learners in spending time with assessment criteria
- Developing learners' evaluative and digital literacy skills
- Providing confidential and immediately collated results
- Supporting group work and independent learning.

PeerMark Lifecycle

SALES

TIME

INTRODUCTION **GROWTH** **MATURITY** **DECLINE**

2016 – Feedback Studio
Feedback studio became the hub where PeerMark is in Turnitin's Product offerings. With a simple web-based interface, educators can create and administer assignments with structured guidance, while observing results with minimal effort. PeerMark improves student writing, editing and critical thinking.

2021 – Opportunities for Growth
PeerMark is figuring out how to sustain growth and remain a market leader while competitors in the market are on the rise. This is a risk for Turnitin.
Opportunities:
- Integrating PeerMark with GradeScope
- Taking advantage of macro-environmental trends
- Implementing intuitive user interface

2000 - New Features
Turnitin began introducing new features to its software that included similarity checking and online grading. With artificial intelligence and machine learning at the forefront of these technologies, they made their breakthrough into the space of education technology (EdTech).

PRODUCT EXTENSION

1998 - PeerMark Created
Created to provide a more engaging platform for students at University of California – Berkeley. Turnitin was founded off of PeerMark

Could PeerMark be a standalone product? At the moment, **no**. While

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This visual slide explains where PeerMark sits in the within Turnitin and how it is used in integrations for Learner Management systems.

Looking into the features provided, I explain why PeerMark is unable to be a standalone product at the moment.

Intro to PeerMark

Product Analysis

We're keeping the good stuff:

>   *Integration into learning management systems, customized feedback, self-review options, and automatic/manual paper*
>
>   *distribution.*

While making a few key changes in response to ongoing feedback we've heard from across the organization, and users of PeerMark

These include:

- Logistics of user interface platforms on both sides (instructors and students).

- Prioritizing instructors and understanding the pedagogical training they may need

- Prioritizing & understanding student needs*: The feedback received weren't worthwhile.* Higher academic achieving students feel

   if they have lesser academic achieving students review their work, it isn't as helpful.
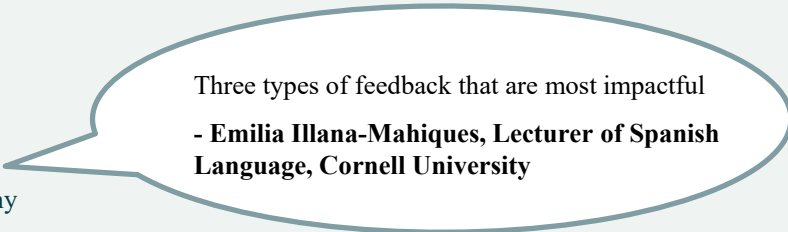
'Language' in Peer Review

Attitudes and Experiences

PeerMark's peer review can be anonymous, with the receiver unknown to contributor, and/or contributor unknown to receiver. Surveys shows that students can sometimes receive irrelevant reviews due to ambiguity, or non neutral languages arising from emotional and subjective stances.

Non neutral languages can be both positive or negative but are not constructive. These lead to issues such as: unreliability, inconsistencies, lack of accountability, and 'wastefulness'. Finding ways to include pedagogical tools that can teach of these difference is critical.

Learning Independence

1. Problem identification
2. Being able to justify a perspective
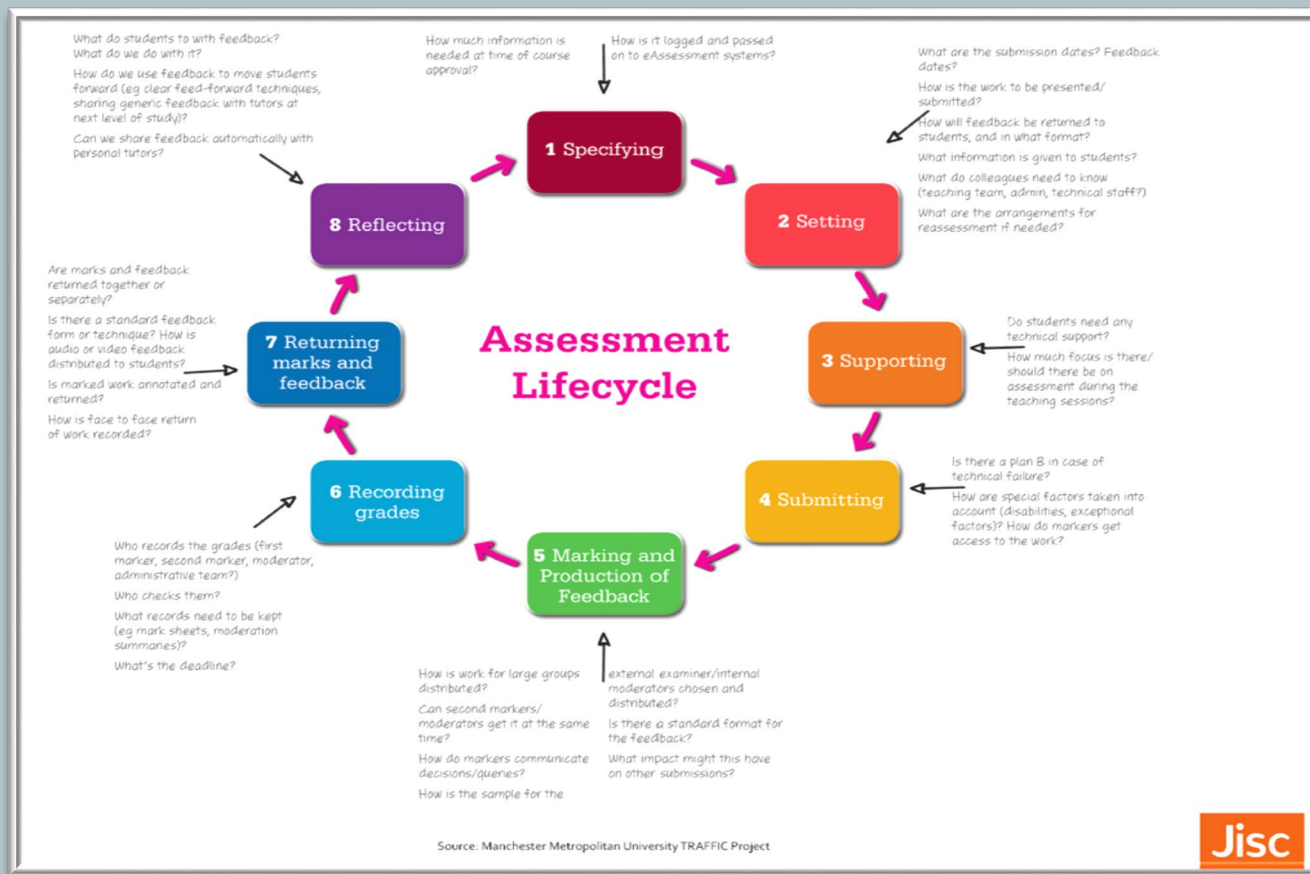3. Explaining positive feedback to specify what was good and why

Three types of feedback that are most impactful

- Emilia Illana-Mahiques, Lecturer of Spanish Language, Cornell University

Notes from an Instructor

1. There is a connection between the students' self-perceived feedback-giving role and the types of feedback they give to their peers

2. Students' assumed feedback-giving role also affects the procedures they follow in peer reviewing and in giving specific types of comments to a peer's text

3. Peer reviewing should be approached from a broader understanding of the concept of feedback in which both reviewers and writers act as active learners seeking to enhance their own learning
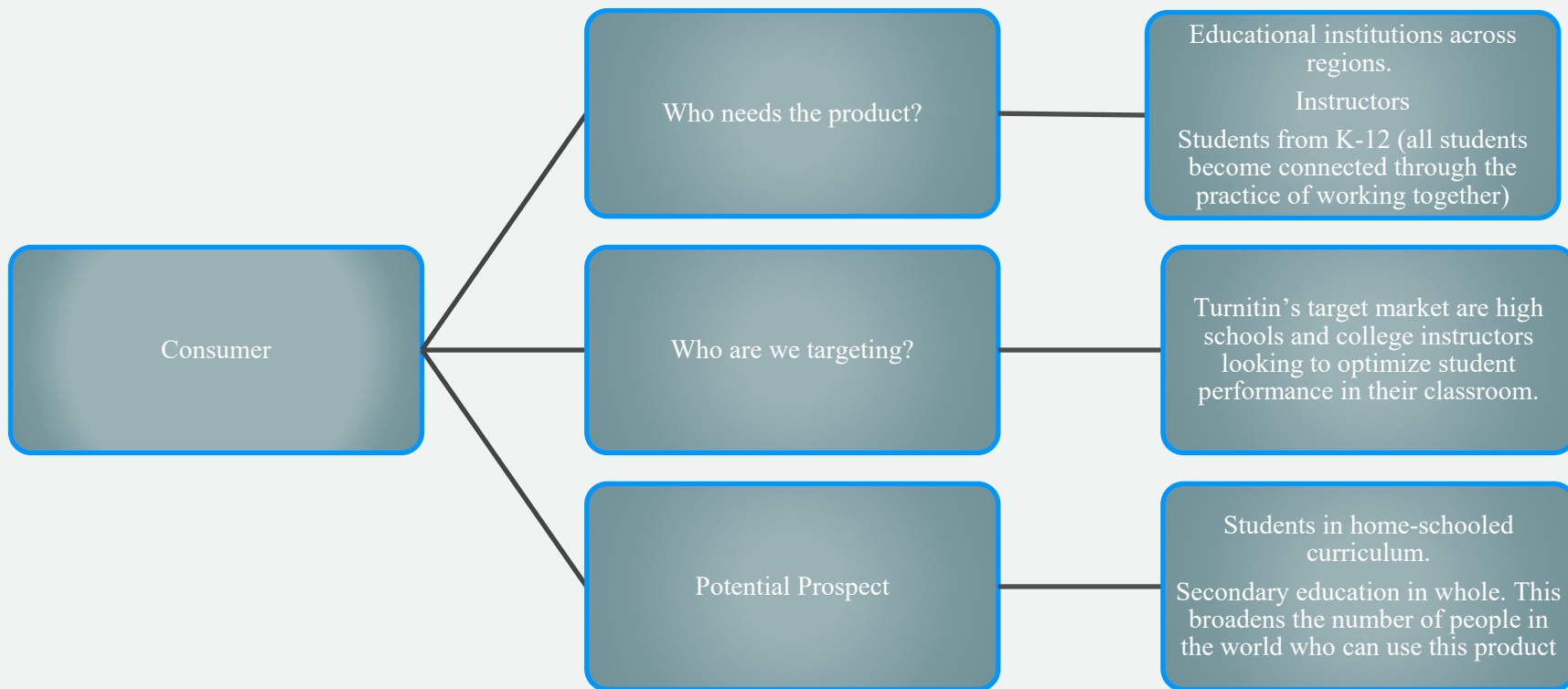
Emilia Illana-Mahiques, Lecturer of Spanish Language, Cornell University

Assessment Lifecycle

1 Specifying
How much information is needed at time of course approval?
How is it logged and passed on to eAssessment systems?

2 Setting
What are the submission dates? Feedback dates?
How is the work to be presented/submitted?
How will feedback be returned to students, and in what format?
What information is given to students?
What do colleagues need to know (teaching team, admin, technical staff?)
What are the arrangements for reassessment if needed?

3 Supporting
Do students need any technical support?
How much focus is there/should there be on assessment during the teaching sessions?

4 Submitting
Is there a plan B in case of technical failure?
How are special factors taken into account (disabilities, exceptional factors)? How do markers get access to the work?

5 Marking and Production of Feedback
How is work for large groups distributed?
Can second markers/moderators get it at the same time?
How do markers communicate decisions/queries?
How is the sample for the external examiner/internal moderators chosen and distributed?
Is there a standard format for the feedback?
What impact might this have on other submissions?

6 Recording grades
Who records the grades (first marker, second marker, moderator, administrative team?)
Who checks them?
What records need to be kept (eg mark sheets, moderation summaries)?
What's the deadline?

7 Returning marks and feedback
Are marks and feedback returned together or separately?
Is there a standard feedback form or technique? How is audio or video feedback distributed to students?
Is marked work annotated and returned?
How is face to face return of work recorded?

8 Reflecting
What do students to with feedback? What do we do with it?
How do we use feedback to move students forward (eg clear feed-forward techniques, sharing generic feedback with tutors at next level of study)?
Can we share feedback automatically with personal tutors?

Source: Manchester Metropolitan University TRAFFIC Project

Peer Review Cycle
- A summative review

Total Addressable Market

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                                      ┌─────────────────────────────┐
                                      │  Educational institutions    │
                    ┌──────────────┐  │  across regions.             │
                    │ Who needs    │──│  Instructors                 │
                    │ the product? │  │  Students from K-12 (all     │
                    └──────────────┘  │  students become connected   │
                                      │  through the practice of     │
                                      │  working together)           │
                                      └─────────────────────────────┘
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Consumer

Who needs the product?

Educational institutions across regions.

Instructors

Students from K-12 (all students become connected through the practice of working together)

Who are we targeting?

Turnitin's target market are high schools and college instructors looking to optimize student performance in their classroom.

Potential Prospect

Students in home-schooled curriculum.

Secondary education in whole. This broadens the number of people in the world who can use this product

Personas - User Story

Provides guiding questions and tasks to students to initiate engagement and critical thinking in students

Marker / Instructor

Reviews peers' work assigned to them though interactive and collaborative peer-grading platform

Student

PeerMark User Metrics

2020			2019			2018	
country	peer review count		country	peer review count		country	peer review count
United States	1454471		United States	1245316		United States		
United Kingdom	55946		United Kingdom	50016		United Kingdom	5424
Canada	29700		Australia	41060		Australia	5000
New Zealand	26118		New Zealand	32766		The Netherlands	4003
The Netherlands	22666		The Netherlands	30166		New Zealand	3836
Australia	22426		Canada	20389		Canada	2852
Singapore	11762		South Africa	17643		South Africa	1535
	11648		Placeholder	8395		Placeholder	1074
Placeholder	7488		China	5538		Korea	817

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Data showed that the United States is the leading country in regard to total submission followed by the United Kingdom and Australia. Data also showed the distinction between the files that were submitted and the files that were actually graded and peer reviewed. With this information, I will provide recommendations on how to minimize that gap with content strategy.

PeerMark User Metrics

	2020	
1		
2	institution_name	peer review count

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Additional metrics were retrieved into the institutions with the leading submissions on the platform.

	2020	
1		
2	integration name	peer review count
3	Native Turnitin interface	
4	LTI API	
5	Blackboard	
6	Moodle Direct	
7	Blackboard Direct	
8	Schoology	
9	MindTap	

Not all submissions came directly from the Turnitin Suite, as institutions predominately uses integrations in their LMS'

Market Size Evaluation

Market Size Evaluation (Crunchbase)									
	PeerMark	PeerGrade	PeerStudio	Feedback Fruits	Kritik	Submittable	Canvas	Moodle	Blackboard
Founded	1998	2015	N/A	2012	2019	2010	2008	2002	1997
Monthly Visits (Crunchbase)	9,911,312	60,227	772	46,504	51,957	2,257,353	2,727,816	533,253	106,786,586
Revenue	N/A	1.9M	N/A	N/A	N/A	17.3M		6M	121M
Size of Company	500-900	10+	N/A	51-100	11-50	101-250	1500-5000	11-50	1001-5000
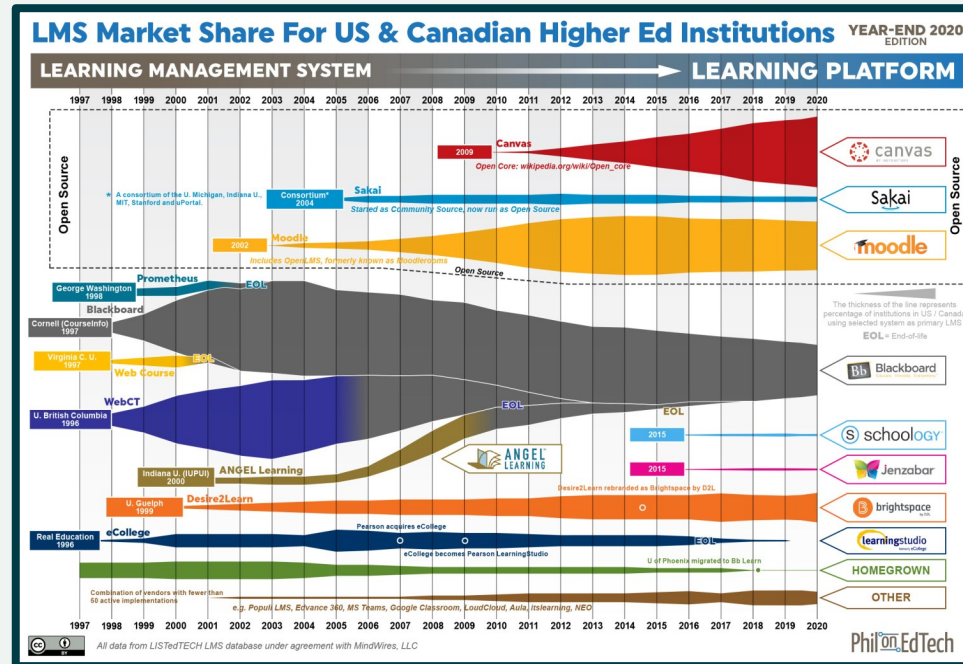
In terms of market momentum, Canvas remains the fastest growing LMS over the past year with 51% of new implementations. Blackboard and Moodle are virtually tied, although both are losing market share.

Competitors

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Peer Grading Platforms

Features	PeerMark	PeerGrade	PeerStudio	Feedback Fruits	Kritik	Submittable	Canvas	Google Classroom	Blackboard	Moodle (Workshop acitivy)
Anonymous Marking	Y	Y	Y	Y	ONLY allows anonymous	Y	Y	X	Y	Y
Individual vs Group Peer review Teachers can change the type of peer review activity from individuals to reviewing the activity either within groups or groups giving feedback to other groups. (CATME)	Y	Y	Y	Y If groups exist in current LMS, they will automatically be synced into FF.	No individual	No individual	Y	X simply a platform for peer review. Students don't get graded on the the given feedback	X	X
Customizable criteria/rubrics	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
qualitative feedbacks	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Self Assessments tool enables students to critically review their own contribution before assessing others'.	Y	Y	X	Y	N	N	N	Y	X	X
Configurable Grading Teachers have the possibility to convert any activity into a summative task, configure which steps of the assignment should be graded and how much element should count to determine the final grade.	N - limited	Y	Y	Y	Y	Y	N	Y	Y	Y
Hold feedback Teachers can set deadlines on when to release feedback	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Multiple due dates	Y	X	Y	Y	X	X	Y	X	Y	
Marking/Highlighting	Y to everything	no; but students can flag for moderation	only rubric and text box available	No highlighting	No highlighting	No highlighting	only rubric and text box available	X	X	
Resubmit on behalf of student	Y	X	X	Y	Y	X	No(click link) this is a wanted feature	X	X	
AI integration that flags inconsistencies	???	X	X	Y	Y	Y	X	X	N/A	
Feedback on videos, sites, docs.	Y	Y	Y	Y	Y	Y	feedback cannot be given in the form of videos	X	N/A	
Resuable assignment/automate teachers can reuse the assignments they created by choosing 'copy from existing' in the set up.	Y	Y	Y	Y	Y	Y	Yes (can be imported)	X	X	
Deadlines Synced to LMS Calendar	Y	Y	Y	ONLY can be used on LMS	Y	X	Y	Y - it is an extension	Y	
E-mail Reminders	Y	Y	Y	Y	N/A	Y	Y	N/A	Y	
Data Driven Insights	Y	Y	Y	Y	Y	Y	Y	N/A	Y	
Dispute Feature	X	X			Y		N/A	N/A	N/A	
Pedagogical Training	Y	Y	Y	Y	Y		N/A	N/A	Y	
Live email and chat support	Y				Y			N/A	Y	

Findings

Consumer Feedback of PeerMark

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Retrieved consumer feedback from instructors using the platform for their students provided reviews of pros/cons, pricing, features and more

Insight was given on the (in)consistency of the platform and the way along with their expectations for progress and upgrades.

How can the platform improve in collaboration, team and file management, and in time management?

Macro-environmental Trends

Due to the global pandemic of the Coronavirus in 2019, face-to-face learning became disrupted, and remote learning became the new normal. With the shift from physical classrooms, new technologies must be developed/enhanced to support remote learning. Additionally with an increase in remote learning, there has also been an increase in social anxiety symptoms compared to prior academic terms (NCBI). The Covid-19 has created negative domino effects that also includes fewer social interactions.

PeerMark can be the solution to social isolation, and the future to remote learning during this pandemic. Building community, networking, and learning with peers are components of PeerMark that are now vital to this social era. Higher engagement in remote learning is our goal and what PeerMark is striving towards.

As society is moving towards remote learning, distance and home-schooled learning are at times used interchangeably. Nonetheless there are distinct differences, particular in learning styles.

Distance Learning
- With distance learning, an online teacher teaches and delivers the content.
- Students remain connected to their school, teachers, and classmates.
- Structured curricula managed by teacher virtually.
- Typically, apart of a school district

Home-Schooled Learning
- Flexible curricula managed by parent or caretaker. Curricula can be based on student's needs or families' philosophies.

Recommendations

MVP Recommendations

- Simplify peer review dates and assignment creation

- Ability/ the extent to which students mark up peer's work

- Understanding effective peer feedback

       - Use of feedback rubric

       - review/moderate student feedback

       - allowing time for students to react to peer feedback

Empathy - Focusing on Instructor Needs

- **Help instructors understand how to drive pedagogical innovation for students**

    - Presenting peer review as an opportunity to give extensive feedback, creating a turnaround resulting in receiving feedback.

    - Linking peer review with learning outcome

- **Instructors = Barrier to Entry**

    - If the instructor isn't going to adapt to software, it doesn't matter the value that it provides to students.

    - How can PeerMark become easier for instructors to configure assignments, how can the workflow be reduced to accomplish tasks – an interesting area of focus to clean up.

    - Cleaning up will enable it to become more "sticky"/useful and enabling it to provide more value to instructors, creating a domino effect of it becoming useful for students as well.

Focusing on Student Needs

Product

- Targeting the younger sector: Strategy team can work with product research and design to identify elements in interface that can be changed to create an impactful experience to the younger market.

  For us to get into this market we can't just give them PeerMark as it is, it needs to adapt.

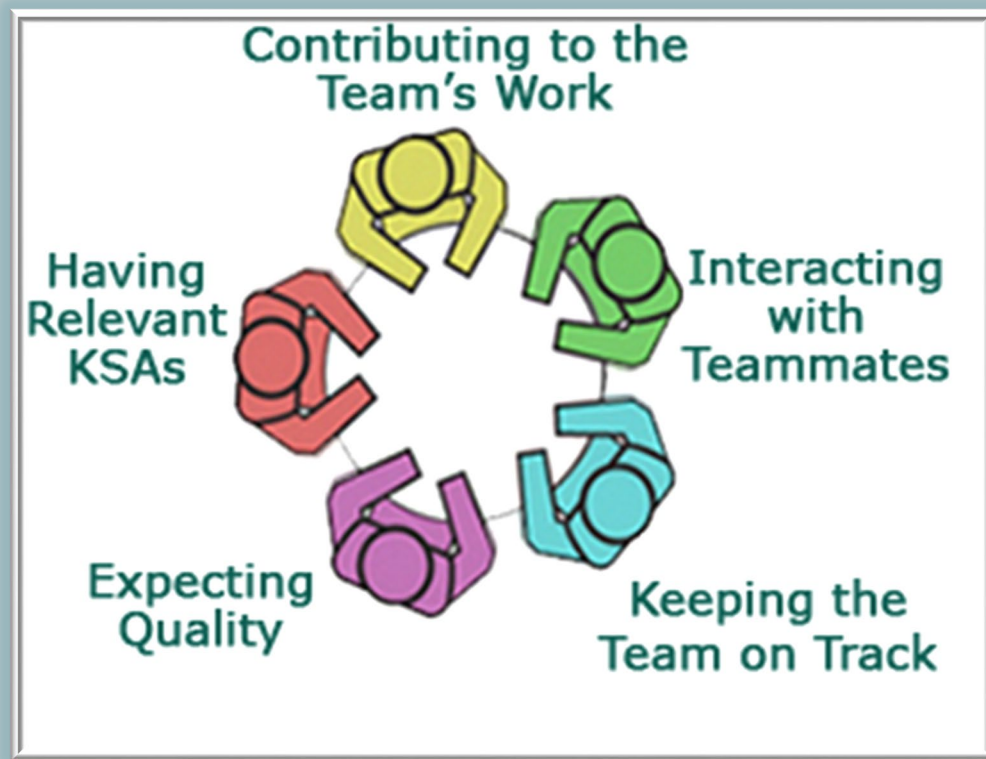- How can the workflow be targeted for younger consumers?

Design for Kids!
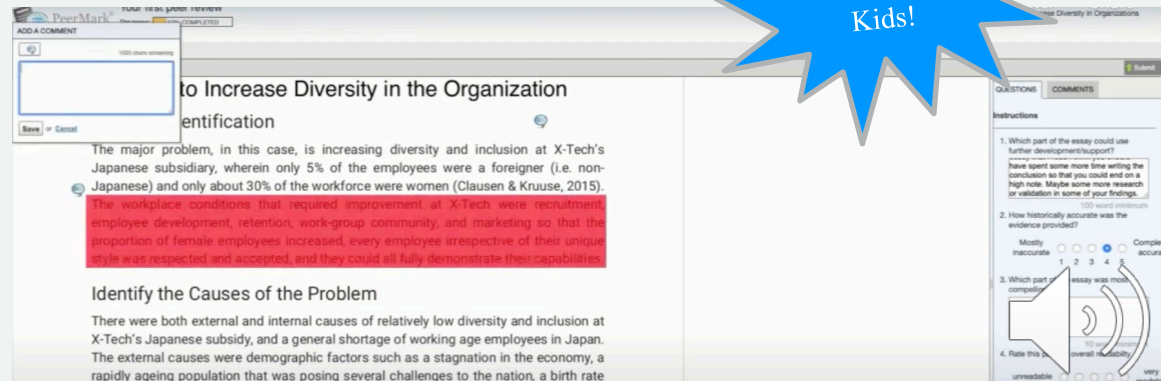
Focusing on Product Marketing

Product

- Additional research to be done on the support of home school associations versus school districts.

- How feasible would it be to have home-schooled students use PeerMark. Whose assignments will the homeschoolers be reviewing/grading.

- Will Turnitin create the network of feasibility of connecting with home school alliance for this segment to work with each other (for home school students grading other home-schooled students).

Contributing to the Team's Work

Interacting with Teammates

Having Relevant KSAs
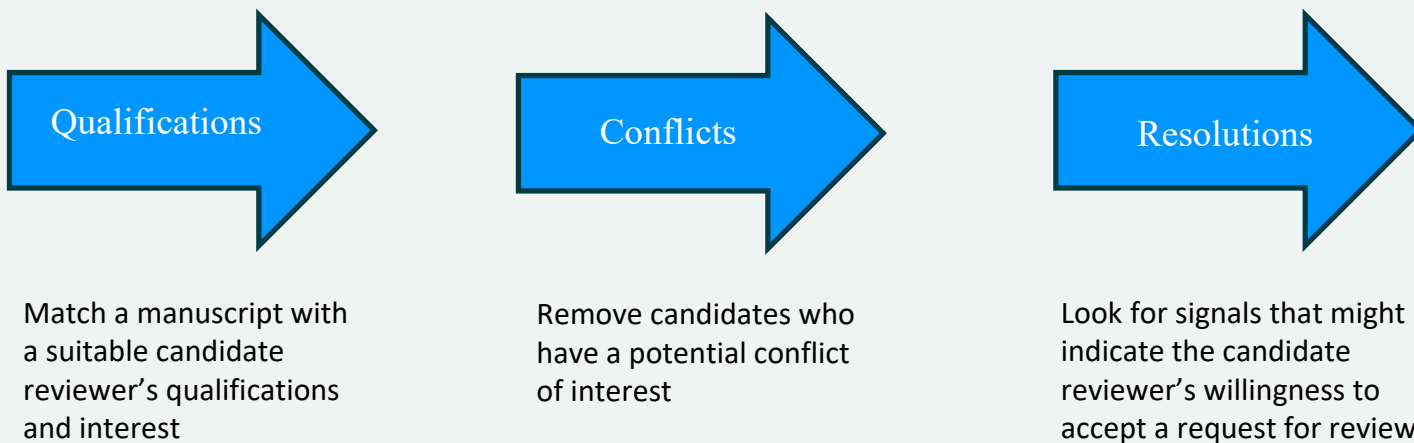
Expecting Quality

Keeping the Team on Track

- Reframe peer review as an opportunity to create an environment of scholarly inquiry.
- Create and sustain peer-review teams as a local community of practice; use virtual platforms to cross institutions.

Artificial Intelligence

How can artificial intelligence be used to enhance PeerMark, especially if it were to enter the 'home-schooling' market?

How can artificial intelligence be used to filter out negative/explicit/ languages used in peer grading (unacceptable to rubric or institutions' standards and policies

Qualifications ➤   Conflicts ➤   Resolutions ➤

Match a manuscript with a suitable candidate reviewer's qualifications and interest

Remove candidates who have a potential conflict of interest

Look for signals that might indicate the candidate reviewer's willingness to accept a request for review.

An Elsevier report from 2018 identified three tasks in the peer review process that could use automation

Integrations

> "80% of submission and instructor usage comes through integrations. 20% of PeerMark assignments are created in the Turnitin site. The plugins are integrated into all the LMS' the same way.
>
> (OMMITED) - Integrations Manager. "

Grade using

Letter
✓ Points
Percentage

Maximum points

100

Anonymous grading

☐ Hide student names

You can't enable anonymous grading because peer review is enabled. Students won't see names on submissions and reviews.

Evaluation options

☐ 2 graders per student

You can't enable parallel grading because peer review is enabled

☑ Peer review
Select peer settings

Assessment results

Questions are disabled when peer review is enabled

💬 **Automated Question Feedback**

💬 **Question Scores**

Cancel   Save

Assessment security

⁑ **Access code**
Add access code

Additional Tools

⧗ **Time limit**
You can't set a time limit because peer review is enabled

▦ **Use grading rubric**
Add grading rubric
When peer review is enabled, peer reviewers can't access the rubric

🏆 **Goals & standards**
Align with goals

👥 **Assigned groups**
You can't create groups because peer review is enabled

📄 **Originality Report**
Enable Turnitin Provider

Cancel   Save

Additional screen captures of the Turnitin Integration on Blackboard

Significance of Gainsight in Turnitin PeerMark

Gainsight features on the Turnitin site aid instructors in their usage. These features are included in LMS applications such as Canvas and Blackboard.
Benefits: easily connect multiple data sources with powerful integrations.

Benefits: Manage the customer at every level without losing sight of the overall picture thanks to standard object structures

Thank you