Jisc

Aula step up report

April 2019

'Step up' is a health check programme for startups and has been developed by Jisc in consultation with the sector and in partnership with Emerge Education. The health check aims to scrutinise startups against key sector requirements, to provide institutions with a certain level of assurance when they are considering engaging with these new enterprises. The accreditations awarded following the vetting process form general information only and are not intended to amount to advice on which an institution should solely rely.

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Aula has been assessed in April 2019 and is judged to be ready for full scale implementation. Based on our assessment the company has the capabilities for implementation at multiple institutions.

Aula has been used by institutions since September 2017 after several years in beta and have proved they have an effective solution. They have successfully implemented pilots in six universities in the UK and are preparing for full scale roll-outs. They meet all legal and technical requirements, are considered financially stable, with a level of team maturity enabling them to provide effective support to multiple customers. The company has developed its own evidence-based impact evaluation framework and a set of effective onboarding processes designed to change management within institutions.

Aula Education Limited | Company Number: 09034773 | VAT No: GB221 2242 69

Date of formation: 12 May 2014 | Date of assessment: April 2019

Web address: **https://aula.education**

Key contact: Anders Krohn, CEO, e: **anders@aula.education**

ASSESSED BY Jisc 2019

Anders Krohn, founder of Aula, provides an overview and explains the problem and solution Aula solves.

Aula is a communication platform for education that replaces emails and learning management systems (eg Moodle, Canvas, Blackboard, D2L) with digital infrastructure designed to encourage interaction and engagement. Aula is fully cloud-hosted and offered on a software as a service (SaaS) basis.

Problem and solution

Student engagement is essential to learning and feeling part of a community. And yet, digital infrastructure used in education is built to store content and manage classes, rather than to engage students. Aula replaces learning management systems like Moodle, Canvas, Blackboard, and D2L with digital infrastructure designed to encourage interaction and collaboration.

The results show that having a platform which makes it easy for academics to teach in a collaborative, engaging, and interactive way enables better teaching at scale and helps students feel connected to a community of students and educators.

We know that moving from vision to reality takes capacity. Aula's Learning Intelligence team is all about adding the upfront and ongoing extra capacity needed to get the results we want - without billing extra. Academics wake up to their course transformed into the new space, and just need to 'press play'. For the rest of the semester, they can forget about the administration of learning and focus on engaging and supporting their students.

Assessment summary table

Criteria		Assessed as
Legal requirements	Company registration	✓
	Insurance	✓
	GDPR	✓
Business proposition and solution	Articulated problem and solution	✓
	Working product	✓
	Existing implementations	✓
	Designed to meet user requirements and evidence of impact/efficacy	✓
	Consistent and validated pricing model	✓
	Financial track record and longevity	✓
Team and capacity	Background and skills	✓
	Development planning	✓
	Scalability	✓
Data and information security	Minimum technical requirements	✓
	Advanced technical requirements	✓ [1]
	Product integration	✓
	Good practise and accessibility	✓

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[1] Regular internal penetration testing, but no external certificate yet – planned before the end of 2019.

Assessment details

Legal requirements		
Legal requirements	The company is legally established to trade within the UK.	✓
Insurance	The company has professional and employee's liability insurance.	✓
GDPR compliance	There is a documented process to keep records in compliance with GDPR. Appropriate data processing agreements and privacy policies are in place.	✓

Business proposition and solution		
Articulated problem and solution	There is a clear definition of the strategic problem addressed by the solution. Its relevance to the UK HE/FE sector is validated through publications, research, government policy, or evidence of market demand.	Research shows that student engagement and community (or 'belonging') are key to student success and continuation. However, the UK Engagement Survey 2017 shows that 44% of students feel that 'learning with others' is not part of their degree, 64% did not regularly interact with staff and 63% of UK students say their teaching staff did not initiate debates and discussions in the past year. As the EDUCAUSE and Bill and Melinda Gates Foundation ELI report on Next Generation Digital Learning Environments concluded, this can partly be explained by the failures of the learning management systems (LMS) used at most HE providers. Aula is a communication platform that replaces learning management systems (LMSs) and virtual learning environments (VLEs) like Moodle, Canvas, and Blackboard. The results show that having a platform which makes it easy to academics to teach in a collaborative, engaging, and interactive way enables better teaching at scale and helps students feel connected to a community of students and educators.	✓
Working product	The company can provide institutions with a working product ready for use.	Aula provides a fully functioning product which has been used by institutions since September 2017, and before that for several years at a beta stage. Programme leaders and educators describe Aula as intuitive, easy to use, and fun. The company has presented demo videos and user testimonials to evidence this.	✓

Existing implementations	The product has been used and evaluated through existing implementations.	Aula is currently working with six institutions on a pilot basis with individual departments, with some transitioning to full-scale roll-outs in 2019. The company has provided examples of impact evaluation data from existing implementations, including feedback and results from data analysis, user surveys, and semi-structured interviews.	✔
Designed to meet user requirements and evidence of impact/efficacy	The product has been designed with user engagement in mind and the company is able to define and track successful use for reporting over the course of/at the end of implementation. The company's solution helps address individual institutional priorities and requirements and there is demonstrable impact of the solution on the problem.	The company has worked with experts including Rose Luckin, Professor of Learner-Centred design at UCL, to develop a set of design principles and a standard evidence-based impact evaluation framework. Aula has embedded the principle of interaction in product design – for example, users are never more than one click away from interacting with another person. Each institution receives a regular report (weekly or fortnightly) with quantitative and qualitative measures, based on a standard, evidence-based impact framework. The metrics include number of daily/weekly active users, number and ownership of interactions (eg direct messages, posts in feed, comments, by educator/student) broken down by users and spaces. This is complemented with qualitative assessment of the spaces, analysing the content of the posts and to what degree it is doing what it should (eg learning engagement, type of post, interactivity). The quantitative and qualitative metrics are supported with detailed surveys sent to all students and educators. The company has provided examples of positive feedback, including case studies, from existing customers indicating that key problems are solved by using Aula across the institution.	✔
Consistent and validated pricing model	The company has a clear pricing strategy and there is a consistent process in place for institutions wishing to buy and/or implement the product. The pricing model (if paid product) has been validated through existing customers (willingness to pay).	There is a consistent pricing model that includes both product, implementation and learning intelligence support, with no additional fees such as consultancy or implementation. A specialised implementation/learning intelligence team the implementation of the product, including full onboarding, workshops with all educators, inductions for students, and continuous, proactive feedback and support. The panel commented on the high quality of the onboarding documentation. Evidence of paying customers was provided.	✔
Financial track record and longevity	The company has a financial track record of at least three years and an overall business risk of low-moderate.		✔
	In the panel's judgment, the company is likely to have sufficient funding and/or revenue to support operations for a minimum period of 12 months and there is a viable investment and/or growth plan in place. It has a consistent track record of raising increasing levels of venture capital financing.		✔

Team and capacity			
Capacity and skills	In the panel's judgment, the team possesses the skills, customer empathy, and execution ability necessary to enable effective implementation, including a clear management structure. At least one team member has a strong technical background and expertise. Senior management team • Anders Krohn, CEO - leads the partnerships (sales) teams • Rachael Curzons, chief learning intelligence officer - leads the learning intelligence team, background in teaching, pedagogy and change management • Oliver Nicolini, CTO - leads the engineering team, responsible for technical development • Adrian Franklin, CPO - leads the product team, responsible for product development • Rune Kvist, COO - leads the operations team		✓
Development planning	Customers are regularly engaged in product/service development activity and there is a consistent process for updates to customers on new and planned developments. Improvements to the product are made based on user feedback.	Customers are regularly engaged in product/service development activity and there is a consistent process for updates to customers on new and planned developments. Improvements to the product are made on the basis of user feedback. A publicly available roadmap is available.	✓
Team scalability	The team possesses necessary skills and management structure in place for effective implementation with a minimum of two-three institutions. There is scalability planning in place for the team to meet growing capacity and support requirements. Proven track record of delivering live implementations and providing appropriate support to several institutions.	Aula has a total of 44 employees, with a Learning Intelligence team to cover implementation and support, relying on a combination of experience in pedagogy with automation and data-enhanced support in order to scale. Every institution has a dedicated engagement partner and engagement associate.	✓

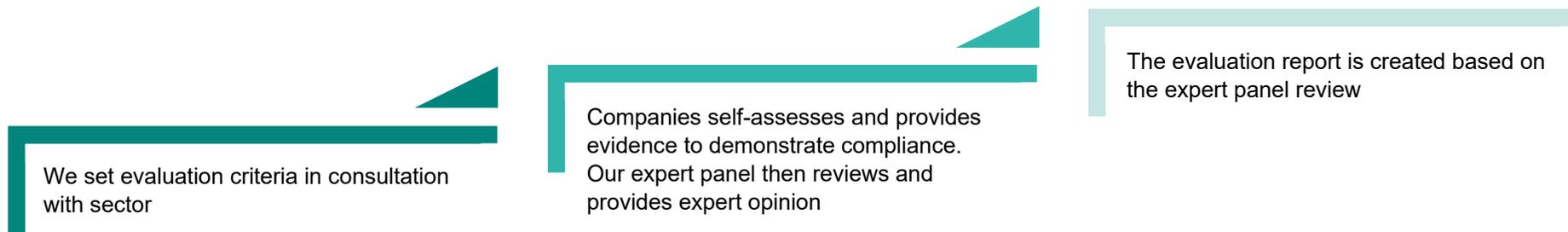| Data and information security * marks minimum technical requirements			
Security awareness*	The company follows the NSCS ten steps for cyber security guidelines, including a clear process for dealing with incidents.		✓
Encryption*	All data is encrypted in transmission. Aula complies with the latest standards of SSL/TLS with an A rating at SSL Labs.		✓
Data storage*	The data is held by AWS in the locations chosen by the individual institution.		✓
Institutional questionnaires	The company has successfully completed several institutional data and security questionnaires. The company has compiled answers to questions from prospective partners to be able to respond to institutional questionnaires.		✓
Password storage	Aula follows OWASP guidelines for password storage. Every user password is hashed using the bcrypt algorithm that is a one way hashing algorithm resistant to brute-force and rainbowtables attacks. Every password used outside SSO is a one-time password valid only for ten minutes.		✓
Technology stack	The company has provided a description of the technology stack used/needed for implementation and can supply this on request.		✓
Penetration testing	The company has run internal penetration testing, with the results used to identify and remove vulnerabilities. External penetration testing has not been carried out but is planned for the future. All the code is dynamically and statically analysed with security-oriented tooling including **https://snyk.io** and eslint. Every microservice is security assessed every two months by the company's tech leads. The most recent security assessment (as of 16 April 2019) was carried out on the 1st of April 2019.		✓
	Advisory: No external penetration testing has been completed yet, with a plan for a full penetration test certificate done by external testers by the end of 2019.		◆
Product integration			
Third party systems	The product has integration with required institutional systems or other systems.	Aula provides an SIS import API endpoint open for institutions to connect to. Grades and submissions can be sent to an arbitrary endpoint to be collected by the institution.	✓
Single sign-on	The product can integrate with institutional single sign-on and preferably integrate with the UK Access Management Federation.	Aula uses SAML-based authentication and integrates with institutional single sign-on/Shibboleth, ADFS and the UK Access Management Federation.	✓
Good practice and accessibility			
Source code management	The development team can evidence good source code management, such as use of Git, and all code developments are tested.	Version control is done using GIT with a strict flow. The master branch of git only contains production code, any fix or feature is developed in a separate branch that is merged into master only after approval and tests.	✓

Accessibility requirements	The web service meets or has a plan to meet WCAG 2.1 checklist Level AA within required timeframes.	Aula is currently 73% AAA+ compliant which is equivalent to meeting WCAG 2.1 checklist Level AA requirements. The company tests accessibility with Lighthouse at every deployment.	✔
	Mobile and desktop apps (where this is relevant) take into consideration accessibility best practice.	The desktop app is an encapsulated version of the web app and follows the same accessibility practices. Mobile apps include descriptive text and ID for every element is leveraged for accessibility and testing purposes. Automated testing is used to ensure accessibility compliance.	✔
Backup requirements	The company has a backup strategy, including a policy on backup retention.	Incremental backups are run every six hours via EBS snapshot, with a full backup every 24 hours via mongodump.	✔
Business continuity and service resilience	The company has a business continuity plan that addresses service continuity and resilience.	Aula carries out monthly tests of its Business Continuity Arrangements by refreshing pre-production environments (eg Beta and Test environments) with data from archives located in a geographically discrete location. If three or more Test Implementation failures occur in a 12-month period, institutions will be informed of the failure and any planned responses. Aula uses a microservice architecture with multiple levels of failure handling: • Process level: instantly restart of failed processes within container • Container level: automatic restarts of containers if they fail or become unresponsive • Machine level: if a machine fails it is automatically replaced by another instance in Aula's clusters. Every service is redundant with at least two copies, machines are distributed across availability zones and are being monitored for failure.	✔
Welsh language			
Products for use in Wales need to provide Welsh versions	A statement of ability to provide a Welsh language version of any student or staff-facing products.	No Welsh language version of the product is available.	◆

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In undertaking this level of due diligence, we hope to reduce some of the risks institutions face when working with startups and increase the level of collaboration between institutions and startups.

The healthcheck process:
Overview of step up and how we assess

We set evaluation criteria in consultation with sector

Companies self-assesses and provides evidence to demonstrate compliance. Our expert panel then reviews and provides expert opinion

The evaluation report is created based on the expert panel review

Step up is a joint initiative by Jisc and Emerge Education.

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