

## **Description of content: Arum, R. and J. Roksa (2011). *Academically adrift: Limited learning on college campuses*, University of Chicago Press.**

### **Summary**

Learning gain in higher education (HE) has risen to international prominence through US sociologists Richard Arum and Josipa Roksa's *Academically Adrift*, published in 2011. It has become a benchmark study and key reference point for current research and policy thinking in the field. This briefing summarises Arum and Roksa's findings based on their research in the USA. It details their conclusions and indicates the international influence of Arum and Roksa's arguments.

As a summary of their work, this briefing provides no critical analysis. It does not indicate whether their findings are empirically justified. Neither do we discuss if their approach is transferable to the UK higher education market.

### **Starting Point: The problem of grades as Accounted for by Arum and Roksa: their solution: learning gain in critical thinking**

In a globalised division of labour, Arum and Roksa argue that the quality and quantity of the outcomes of a country's education system are related to that nation's future international economic position. In contrast to previous research that has focused on retention in higher education as a core area of policy and institutional concern, they identify a research gap in the factors that facilitate acquirement of higher-level cognitive skills in higher education. Arum and Roksa acknowledge that grades are an effective way of measuring student learning *within a particular course of study and a particular year group*, since most institutions in the United States have a scaled grading system already in place. However they also note that in the United States grades alone 'provide only a very limited and inadequate assessment of student learning' (p.29)<sup>1</sup>. This is because:

- Grades fail to measure student learning or link student experiences to growth in learning;
- Grades are an unreliable comparative measure *across classes and institutions*, and inconsistencies exist even across teachers within institutions and there are discrepancies in scale and grade definition between institutions; and
- Grade inflation has occurred over time.

Addressing this problem, Arum and Roksa instead focus on students' learning gain in higher-order cognitive skills, defined as critical thinking; complex reasoning; and written communication. The inclusion of higher-order cognitive skills expands the way to measure learning gain in HE that looks at students' earned grades. They acknowledge that students "may have developed subject-specific skills" (p.121) but the authors' intention was to assess learning gain across subjects. Their instrument to measure learning gain focuses on outcomes that "cannot be taught sufficiently in any one course or major but rather are the *collective and cumulative* result of what takes place or does not place over the four to six years of undergraduate education in and out of the classroom" (Hersch, 2007).

The authors use the so-called College Learning Assessment (CLA) to measure students' learning gain in higher education. The CLA was launched by the US Council for Aid to Education, collaborators of the

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<sup>1</sup> All direct quotes in this briefing refer to Arum and Roksa (2011).

authors. It consists of three open-ended assessment components; a performance task and two analytical writing tasks (i.e. to make and break an argument). The authors focus their analysis on the performance component of the CLA.

In the performance task, students are provided with a problem and supporting documents, they are asked to compose a memo to a potential employer proposing a solution. It allows students up to ninety minutes to respond to a writing prompt that is associated with a set of background documents. The authors quote various examples, such as the 'crime reduction problem': "Jamie Eager is a candidate who is opposing Pat Stone for re-election. Eager critiques the Mayor's solution to reducing crime by increasing the number of police officers. Eager proposes the city support a drug education program for addicts because, according to Eager, addicts are the major source of the city's crime problem" (p.22). Students are provided with documents such as newspaper articles, crime and drug statistics, research briefs, and internal administrative memos. They are then asked to address the following task: "Mayor Pat Stone asks you to do two things: (1) evaluate the validity of Eager's proposal, and (2) assess the validity of Eager's criticism of the Mayor's plan to increase the number of officers" (p.22).

The method was lauded as it uses "real-world" problems which require "real-world skills" (Stoesz 2011). The authors used longitudinal CLA test scores based on 2,322 students measured in autumn 2005 (their freshman year) and in spring 2007 (their sophomore year). The participating students studied at twenty-four US HEIs 'of varying sizes, selectivity and missions'. This also included private residential liberal arts colleges and large research institutions as well as a number of Historically Black Colleges and Universities (HBCU's) and Hispanic Serving Institutions (HSI). What has made academics and policy-makers take notice of this approach is Arum and Roska's empirical finding: almost half (45%) of the students in their sample did not improve their higher cognitive skills (as defined by critical thinking, complex reasoning, writing) during their time in higher education.

## Content of the book

The book consists of five chapters: College Culture and Student learning; Origins and Trajectories; Pathways through Colleges Adrift; Channelling Students' Energies toward Learning; and A Mandate for Reform. There is also a large methodological Appendix which outlines the procedures of the study.

The conceptual framework that Arum and Roksa draw on is divided into:

- Factors prior to HE entry for example, includes socio-demographic and high school characteristics such as gender, race/ethnicity, parental education and occupation;
- Academic preparation such as high school grades; and
- Factors after college entry which Arum and Roksa refer to as hours spend studying, the field of study, faculty expectations, reading/writing course requirements, and the institutions attended.

### *Chapter 1: College cultures and student learning*

At entry level, the authors find that many students were already 'academically adrift' i.e. they were poorly prepared by their secondary school; they came with attitudes, norms, values and behaviour at odds with academic commitment for their higher studies; and they had limited knowledge about their chosen (target) occupation. This situation becomes further exacerbated when these students are in higher education as they develop the "art of college management" (p.4), which means they learn to

navigate academic course requirements with modest levels of individual investment. According to their findings, students spend little time studying individually at home and do not undertake many reading or writing requirements that have little or no impact on their grade point averages. Instead, they engage in a multitude of academic and non-academic related activities including alcohol and drug experimentation, cheating at exams and also take on employment while attempting to complete degrees. The authors identify a bargaining procedure between lecturer and student, a 'disengagement contract', which is deeply rooted in the rational behaviour of students: "a market-based logic of education encourages students to focus on its instrumental value – that is a credential – and to ignore its academic meaning and moral character" (p.16). Following this line of argument, students see themselves, and are also seen by lecturers, as consumers purchasing a degree. Neither students nor lecturers expect students to be actively engaged in their learning process as such.

The authors found that there was no solid, available evidence of learning gain in HE in terms of the identified higher-order cognitive skills (critical thinking; complex reasoning; and written communication). However, many policy-makers, parents and potential students, and employers require knowledge of the level of cognitive skills they can expect of higher education graduates. Policy-makers are interested in knowing whether national engagement in HE pays off, while parents and potential students; likewise want to know whether their financial and time investment to HE will be "worth it" in terms of the skills they gain and their transferability to the workplace and, if so, which HEI they should select to provide the best return on that investment.

The authors found that the education of undergraduate students was, in many HEIs, a limited component of a much larger set of professional interests, and one that generally is not perceived as being significantly rewarding. The institutional demands and individual staff incentives within HEIs focus on research productivity as teaching and university services are not important to gain tenure at US HEIs. Moreover teaching is often seen as an art. As a consequence, it is beyond formal preparation; its quality depends on a lecturers personality and therefore many think that it cannot be taught or learnt; and can only be conveyed to students with the necessary 'gift'.

Arum and Roksa quote Astin's (1993) work, in which, he distinguishes two types of HEIs in regards to their involvement with students. On one hand, there are research-orientated institutions defined in terms of their publication rate, the time and personal commitment they spend on research. On the other, there are student-orientated HEIs with a strong focus on student development. Interestingly, when looking at graduates' position in the labour market, there was a negative correlation between student orientation and graduates' income, i.e. graduates from institutions with a strong focus towards students learning were less likely to find a highly paid job. It seems that institutional incentive towards research results in significantly higher wages for graduates, and institutions with a stronger focus towards students learning are being penalised.

## *Chapter 2: Origins and Trajectories*

Arum and Roksa argue that one of the principal goals of higher education was teaching students to think critically and communicate effectively. As there are no universal standards for learning in higher education it is impossible to identify how much learning is enough, desirable or can reasonably be expected.

### **Is education a solution to social inequality or does it reproduce it?**

Recognising the influence of social and cultural capital, Arum and Roksa highlight how students from higher social classes learn skills through their background which could, in turn, be rewarded in school, granting children from more privileged family's higher grades, better course placements, and other positive outcomes. However, they argue that, "when students enter higher education academically disadvantaged, they remain unequal, or in some instances grow even further apart" (p.40).

They observe empirically inequality according to racial, ethnical and/or class background but not gender. Differences at the access stage refer to both inadequate academic preparation (i.e. students dropping necessary subjects in high school) and lack of careers clarity and educational pathways. After adjusting for academic preparation, the gap in CLA scores between different ethnicities dropped to approximately one-third of its original magnitude. The authors conclude that these results offer some hope for reducing inequalities in higher education. "Students from less educated families can do as well – in terms of growth in critical thinking, complex reasoning, and writing skills ... – as those from more educated families, but they need better academic experiences in high school than they are currently receiving" (p.50).

### **What is the role of HEIs in combating social inequality?**

The authors reject the notion that HEIs' role is merely in the selection and certification of students. They argue that institutional selectivity is likely to shape the climate of the institution and that high-performing peers can help the improvement of all students, including those who are less prepared academically. The authors strongly believe that institutions have a great capacity to improve all students' critical thinking skills and to diminish social inequality. "Success may thus be a product not simply of students' individual backgrounds or what they bring to higher education but also of the context in which they are embedded. Given the patterns of institutional attendance, we can expect higher education experiences to contribute to – or even exacerbate, as opposed to eliminate – the observed patterns of social inequality" (p. 53).

### **Why is learning gain important in the context of mass higher education?**

The authors argue that mass higher education has improved the opportunities for students from all backgrounds despite persistent inequalities (i.e. selection of HEI, financial affordability). However, the authors criticise the lack of information on learning gain for existing students, and the practice of school councillors pushing less-academic students towards HE.

As a consequence, mass higher education requires HEIs to focus on undergraduate learning as much as primary and secondary schools. The higher education sector needs to demonstrate significant academic growth of its students as otherwise it "becomes little more than ... [the] ... warehousing students during the years when they would otherwise face an elevated risk of unemployment and criminal behaviour" (p.55). If higher education is simply associated with individuals attaining educational degrees, and if certificates that do not reflect improvement in academic performance ('credentialing' or 'positive signalling'), its positive benefits are muted once college education becomes universal. Undoubtedly many students enter higher education academically unprepared, this unpreparedness, however, should not result in negligent of their progress.

### *Chapter 3: Pathways through Colleges Adrift*

Two kinds of learning take place at HE: social learning, creativity, individual growth outside classes in connection with peers; and academic learning (i.e. critical thinking, complex reasoning, and written communication) based on academic and instructional experiences.

The authors argue that a student culture exists which is focused on social life and the strategic management of work requirements. While they acknowledge that many students were relatively hard-working and motivated, they feel that students' inflated ambitions and high aspirations have not been met instructionally by equivalently high academic demands from their professors "nor have many of them found a sense of academic purpose or academic commitment at (...) colleges" (p.89).

#### **Academic Engagement and Instructional Climates**

Academic engagement is measured using student-staff contact outside of the classroom; peer climate (peers academic aspirations, peer support); time students spend on homework and course requirements set by lectures; and courses taken (the vocationality of courses).

The authors found, that in general, non-traditional students and students in less selective HEIs were less likely to have contact with staff outside of the classroom; to report on supportive peers' climate; to spend time on homework or attend courses with high requirements. Many students follow a 'credentialist-collegiate' orientation in which they try to earn their degree with as little effort as possible. Students are more likely to choose courses according to the expected degree of difficulty or the course requirements rather than following courses aligned with well-articulated developmental or occupational goals. This behaviour has resulted in 'grade inflation', i.e. despite the decreasing time students' spend on homework and the lower requirements, students gain high grades.

#### **Student college life and financial challenges**

Students life at college is shaped by the HEIs provision of institutional activities, such as housing, clubs or Greek life (i.e. fraternities and sororities), and their preferences to take advantage of these institutions and activities. These institutions and activities often act as a proxy for social background and academic orientation. As college costs have increased over time, many students work during their years in college with existing differences in the amount of working hours and the reasons for work.

The authors found that many students failed to understand the true meaning and long-term consequences of debts occurring from their loans. The students expect that, after graduation, they will be employed on the basis of their degree. This perspective, however, is not realistic as many do not know which career they want to pursue, and which is not captured in existing economic research. This ignorance is a major discrepancy in current economic models in which policy-makers assume that school-leavers and other entrants to higher education are able to make well-informed choices about whether and where to invest in their higher education. "These limitations to rational educational decision-making exist for many students regardless of the fact that many economists have been willing to assume analytical models based on students who act as 'adolescent econometrician' when making choices about educational investments" (p.88).

### *Chapter 4: Channelling Students' Energies toward Learning*

The authors criticise the role of HE as a sorting mechanism in which the most capable applicants are selected into the most-reputable HEIs. In this perspective, those graduating from these HEIs would still be the 'best and brightest', and higher education has no or limited input in shaping the experiences

of students. Arum and Roksa dismiss this notion, arguing that HEIs are able to shape students' experiences in ways that facilitate learning. They offer five specific ripostes:

- **Investing time in learning.** The authors challenge the concept of social integration as driving students' success. Based on their empirical work (e.g. studying alone enhances student learning more than studying with peers), they conclude that measures of social integration either have no or negative consequences for learning gain.
- **Fields of study.** Specific educational practices such as lecturer-student contact or engagement in active learning differ across different subject with implications for the learning gain.
- **Financing College Education and learning.** Employment during college is not related to students' learning, however, the proportion of college costs covered through grants/scholarships is positively associated with CLA growth.
- **Gaps in CLA growth between African-American and White Students.** The authors found lower rates of progress in skills of African-American students.
- **Variation Across and Within Institutions.** Even if academic preparation and social background is taken into account, the influence of HEIs on learning gain is significant. This influence is explained by course requirements, for example "faculty investing more time in students and taking greater responsibility for them, as well as showing greater commitment to both providing and receiving feedback" (p.116).

#### *Chapter 5: A Mandate for Reform*

The authors argue that any transformation of the HE system must come from within the sector. Considering that limited learning gain has a diverse set of causes, potential efforts towards a reform must be multifaceted.

The authors deny that because limited learning gain exists in the US HE system, the system is in crisis. Institutional and system-level survival is not threatened. In general, students seem to enjoy the focus on social life while earning high marks with relatively little investment of effort, and professors are eager to find time to concentrate on their scholarship and professional interests. However, in the long run, the country's global economic competitiveness is threatened, in the short term, HEI's can still function effectively: graduates are allocated to occupational positions based on their credentials not their skills, and students can experiment with new forms of social behaviour and develop independent identities. Nevertheless, the authors expected that as employers rate written communication, critical thinking and problem solving as very important for the success of their business, they will start to turn to graduate schools and foreign sources of labour to fill positions that require higher-level capacities.

The authors offer the following recommendations for HE reform:

- **Higher education leadership.** It is not enough for HEIs simply to graduate students if the credentials obtained do not reflect substantive academic accomplishments and especially if the students have not developed an appreciation of those accomplishments. HE management should communicate greater commitment to undergraduate learning.
- **Improving curriculum and instruction.** As academically rigorous instruction is associated with improved performance on tasks requiring critical thinking, complex reasoning and written communication, HEI staff should monitor and enhance the academic requirements of courses. There needs to be a shift towards the acknowledgement of pedagogic skills amongst faculty. Also, student's active participation in class (i.e. presentations, discussions) should be encouraged.



- **Institutional transparency and accountability.** The consumer-driven US HE market has increased the number of students and thus expanded and diversified the HE system. However, even if students are seen as consumers, the authors are sceptical if information on learning gain will be used to select the appropriate HEI. Transparent and accessible data on student outcomes in terms of their learning gains and grades should be collected routinely.
- **Reaching for the Moon.** HEIs were traditionally created to achieve moral ends such as the lifelong love of learning; the ability to think critically and communicate effectively; and the willingness to embrace and assume adult responsibility. The authors hope that HEIs will be able to reconnect with these earlier functions.

## Reception of Arum and Roksa's approach.

Arum and Roksa's research was widely reviewed and applied to other national settings e.g. China (Ding et al., 2016), England (McGrath et al., 2015) and Norway (Sweetman et al., 2014). Resonating with their interpretation about the lack of awareness of a crisis in the UK HE system, the authors quote Princeton Professor Stanley Katz:

The public is quite satisfied with what higher education is doing on the whole. This is a market system, and the customers are buying. We have by a considerable measure the finest system of higher education in the world. And if that's the case, this is an 'ain't broke, don't fix it' situation. (p.24)

In addition, a large-scale, longitudinal study to investigate critical factors that affect the outcomes of liberal arts education was conducted by the Centre of Inquiry led the Wabash National Study of Liberal Arts Education (<http://www.liberalarts.wabash.edu/study-overview/>), and the OECD has conducted a feasibility study to measure learning gain in higher education (AHELO, <https://www.oecd.org/site/ahelo/>).

However, the method of Arum and Roksa's study has also been criticised and the validity of their results questioned. Pre-empting this criticism, the authors accept that it is complicated to measure the 'value added' of HE "when so much of the experience of the students is out of control of colleges" (p.26). Moreover they acknowledge that the CLA is "not at a stage of scientific knowledge where college students' learning outcomes can be measured with sufficient precision" (p.141). Nevertheless some methodological and conceptual criticisms remain:

- There is no literature review included specifically on undergraduate improvement in writing and critical thinking (Haswell, 2012, Gunner, 2012).
- The data cannot be relied upon due to the self-selection of participants, the high retention rate and the lack of re-tests (Haswell, 2012).
- Whilst seemingly large - 2300 respondents – the sample becomes much thinner and not equally distributed when disaggregated by student type so that its robustness is questionable (Murphey, 2011).
- Relatedly, the authors concentrated on traditional students undertaking a 4-year-course at 18 years of age rather than taking the diversity of the student body and the variety of institutions into account (Calhoon-Dillahunt, 2012).
- The authors' concentrate on students' "capacity for critical thinking, complex reasoning, and writing and neglect subject-specific skills and knowledge" (Murphey, 2011). They also fuse all three types of learning gain "critical thinking, complex reasoning, and writing" together into one number (Gunner, 2012, Haswell, 2012).

- The decline of reading and writing does not exclusively take place in HE, there is a general decline of reading and writing ability leading to a general questioning of the way high reading standards were operationalised (Campbell et al., 2015, Redd, 2012).
- Relatedly, the research concentrated on very narrow and traditional views of learning inconsistent with current “twenty-first century literacies” (Calhoon-Dillahunt, 2012, p. 497)
- Suggested improvements would increase the HE administration as it would increase tracking and measuring rather than investment in teachers and students (Gunner, 2012).
- The recommendations do not take into account teaching staff’s working conditions (Calhoon-Dillahunt, 2012).
- Students’ outcome in terms of employment and salaries is excluded from the study (Coates and Morrison, 2013).

Despite the study’s methodological and conceptual weaknesses, Arum and Roksa’s findings are seen as troubling and demand attention (Calhoon-Dillahunt, 2012), particularly since they are supported by other studies such as the Wabash National Study of Liberal Arts Education.

## Key take home points

Academically Adrift has been highly influential in the recent study of learning gain in higher education globally. The main findings of their study were:

- Nearly half of all students did not improve their higher-level cognitive skills (i.e. critical thinking, complex reasoning, and writing).
- Many students enter higher education academically unprepared, concentrate on social learning and prioritise courses with low academic requirements.
- Undergraduate learning is rarely adequately prioritised by HE staff. Due to the institutional reward system, lecturers are encouraged to concentrate on their research output rather than on the quality of their teaching.
- Both students and lecturers game the system to their mutual benefit and which drives the current system’s maintenance.
- Undergraduate learning is highly dependent on factors prior to HE entry (such as personal and high school characteristics); academic preparation; and factors after college entry (such as the field of study or lecturers’ expectations, institutions).
- Long term national economic problems are created by students’ limited learning gain.

Criticism of *Academically Adrift* has been mainly centred on its methodological and conceptual shortcomings. Nevertheless, plaudits laud the way in which the study has put undergraduates’ learning gain back on the research agenda. As a minimum, *Academically Adrift* has highlighted a need for further research on undergraduate learning in higher education.

This description of the content does not indicate whether their findings are empirically justified. Please also note that this discussion refers to a US context and we do not discuss if Arum and Roksa’s findings and approach are transferable to the UK higher education market.



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