

SURVEY OF GRADUATE TRACKING SYSTEMS AROUND THE WORLD

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ABSTRACT: Universities and university systems around the world are increasingly recognizing the importance of gathering information about (and from) their graduates in order to assess and improve institutional quality, monitor employment outcomes, adapt old, and develop new, curriculum and influence institutional performance management systems. Using its expertise in higher education measurement systems together with original data collected from a panel of international experts in more than 10 countries, the Higher Education Strategy Associates (HESA) paper cuts across three of the conference topics (managing graduate data for quality assurance, using graduate tracking data for curriculum development and graduate voices on the transition from school to career) to examine national and regional graduate tracking systems that are being used around the world in terms of their author/s, objectives, timing after graduation and number of follow-ups, topics covered and methods used for feeding the findings back into the policy loop. With a focus on good practice, innovative practice, and cost-effective practice, the paper describes some of the most successful graduate tracking systems in different countries in terms of meeting their objectives.

1. INTRODUCTION

Universities and university systems around the world are increasingly recognizing the importance of gathering information about (and from) their graduates in order to assess and improve institutional quality, monitor employment outcomes, adapt old, and develop new, curriculum and influence institutional performance management systems. This paper uses original data on national graduate tracking surveys³ in 10 countries to cut across three of the UNESCO CEPES conference topics (managing graduate data for quality assurance, using graduate tracking data for curriculum development and graduate voices on the transition from school to career) to examine graduate tracking systems that are being used around the world in terms of:

- Who carries them out: Graduate surveys are conceptualized and implemented by different actors including government departments or agencies, higher education institutions, independently contracted non-profit organizations and various combinations of actors.
- Their objectives: Graduate surveys generally have multiple objectives including information provision for policy makers at the governmental, and faculty/administrators at the institutional, levels as well as for prospective and current students. Some graduate surveys are used by governments to assess institutional performance and allow inter-institutional comparison.
- Their timing: Surveys differ in terms of when graduates are first interviewed (six months after graduation, 1 year after graduation, etc.), when follow-ups of that same cohort, if any, are carried out (two years later, three years later etc.) and the frequency with which new cohorts are surveyed (every year, every two years, periodically).
- Their methodology: Graduate surveys make different decisions in regards to their methodology including the sample (all students versus a certain category of students); the survey type (census versus sample survey) and the administration method (traditional pen and paper versus electronic surveys).
- The topics they cover: The topics covered in the graduate surveys range from graduate satisfaction with the quality of their academic programs and the usefulness of their program for finding a job to straight factual questions regarding the graduate's employment status and earnings.

- Methods used for feeding the findings back into the policy loop: graduate surveys are only useful if the information gets to the people it is supposed to help. The degree to which information is used to make needed changes and influence future policy is largely dependent on the channels that are in place to funnel information back to policy makers, faculty and administrators and students.

2. NATIONAL SURVEYS IN 10 COUNTRIES

Author and Purpose of Research

The actors involved in national level surveys vary from country to country as does the allocation of responsibility among them. Some surveys (the B&B study in the United States [1]) are coordinated by specialized offices in government departments or ministries, others (the DLHE Longitudinal Survey in the United Kingdom [2] and the Swiss Graduate Study [3]) by government bodies responsible for collecting higher education statistics or semi-autonomous bodies such as Graduate Careers Australia [4], and still others by independently contracted organizations such as the Australian Council for Educational Research [5]. In all of these cases, survey administration can be done centrally (as in Hungary [6], and the United States) with the central agencies accessing student contact data from the universities and contacting the students themselves or it can be done through universities (Australia, Malaysia [7], Singapore [8]) especially in countries where there is concern about providing student data to third parties. In Colombia [9] and the UK [DLHE], the surveys are centrally coordinated, but survey administration is done at both the central and institutional levels to reach as many graduates as possible. The DLHE survey in the UK has printed versions of the survey sent to universities for their distribution, makes an HTML version available for institutions to host on their website (though this is being discontinued), hosts a centrally-hosted online version and provides a PDF version on the SLHE website. In Colombia, students can access the electronic survey at the Labour Observatory's website, but institutions are also allowed to download the survey and administer it directly.

More importantly perhaps than who conducts the surveys, is the purposes for which they are conducted. Table 1 shows which of four common graduate survey purposes (defined in the key under the table) are pursued in each survey. All of the surveys aim to provide information to universities on their

graduates' perceptions and outcomes that can be helpful in developing future academic programs and improving the quality of current programs and their relevance for employment. Most of the surveys (10 of the 12) also aim to provide information to government policy makers for use in future planning. Several of the surveys (in Australia, Hungary and the UK) also specifically aim to provide information to career advisors so they can integrate the results into their counseling practices and channel up-to-date information to current and prospective students to assist them in making informed course and career decisions. A few (Germany [10],

Hungary and the UK) collect information for performance management purposes. The Higher Education Statistics Agency in the UK, for example, produces an annual publication on performance indicators including employment after graduation on behalf of the Higher Education Funding Council for England. These indicators are designed to provide a consistent set of measures on the nature and performance of the higher education sector UK and to contribute to a greater public accountability by the sector.

Table 1. National Level: Author and Purpose of Research

Country and Instrument	Who is carrying out research?	Purpose/s
Australia Australian Graduate Survey/ Beyond Graduation Survey	Graduate Careers Australia ¹ Each university has a Survey Manager who is responsible for working on the administration of the survey. Centrally coordinated by Graduate Careers Australia, institutionally administered (Beyond Graduation Survey has a mix of institutional and central administration)	1, 2, 3
Australia 2008 Graduate Pathways Survey	Australian Council for Educational Research for the Department of Education, Employment and Workplace Relations Centrally coordinated by ACER, institutionally administered	1, 2
Canada National Graduates' Survey/Follow-up of Graduates	Statistics Canada	1
Colombia Graduate Survey	Graduados Colombia Observatorio Laboral para la Educacion (Labor Observatory for Education in the Ministry of National Education) Centrally coordinated and administered, though institutions may download surveys and administer them to students themselves.	1, 2
Germany Survey of bachelor's graduates	Hochschul Information Systems (HIS)	1, 2, 4
Hungary Graduate Tracking Research	Educatio Diplomas Centrally administered by Educatio.	1, 2, 4
Malaysia Higher Learning Institutions Tracer Study	Ministry of Higher Education Centrally coordinated and institutionally administered	1, 2
Singapore Graduate Employment Survey	Ministry of Education Centrally coordinated and institutionally administered	1, 2
Switzerland Swiss Graduate Survey	Federal Statistical Office in collaboration with market and social research organizations. Centrally coordinated and administered.	1,2,3
United Kingdom (England and Wales) Destinations of Leavers from Higher Education/DLHE Longitudinal Survey	Higher Education Statistics Agency Centrally coordinated and mix of institutional and central administration.	1, 2, 3, 4
United States Baccalaureate and Beyond Longitudinal Study	National Center for Education Statistics Centrally coordinated and administered	1, 2
United States National Survey of Recent College Graduates	National Science Foundation Centrally coordinated and administered	1, 2

Purposes Key:

1. To provide information to policy makers and work force planners for use in shaping future education policy.
2. To provide data on graduate outcomes including student satisfaction data and student employment information/data to universities (teachers and administrators) for use in future planning, in developing future academic programs (curricular development) and to improve quality of current programs and services (including career counseling) and their relevance for employment (institutional development).
3. To provide info to current and prospective students to assist them in making informed course and career decisions
4. To collect comparable data for benchmarking institutional performance.

¹Peak body with representatives from universities and government, as well as graduate recruiters.

Methodology

Graduate outcome surveys can be either censuses, which seek responses from all students who have graduated in a certain year or sample surveys, which seek responses from a subset (generally selected randomly) of that total population of graduated students. Eight of the 12 graduate surveys being examined here are censuses and a number of them are quite successful in generating responses from a large number of graduates. The other four graduate surveys use random or representative survey samples due to cost considerations and/or size of the student body.

Some of the graduate student surveys are cross sectional, i.e. they look at a cross section of graduates, at one point in time a certain number of years after course completion. Others are longitudinal, i.e. they look at the same graduates over time. Five of the graduate surveys are cross sectional, six are

longitudinal and one (Colombia) appears to be repeated cross-sectional in that graduates are interviewed at different periods after graduation, but it is not the same set of graduates. Threecross sectional surveys (the AGS in Australia, the NGS in Canada and the DLHE in the UK) are used as the basis for a longitudinal follow up of those who responded to the initial cross sectional survey. The timing of the follow ups in the longitudinal surveys varies widely. In the Graduate Survey in Germany, the graduates are first surveyed when they are one year post completion and then again after 5 years and then 10 years. While the cross sectional surveys tend to be carried out yearly, the frequency with which new cohorts are surveyed varies in the longitudinal type surveys. The Australian Beyond Graduation Surveys starts a new cohort each year, while in the United States different periods of time pass between cohorts and as of 2011, the B&B Study had only surveyed three cohorts since 1994.

Table 2. National Level: Sample Frame and Periodicity

Country and Instrument	Census vs. Sample	Periodicity		
		First interview	Timing of follow-up with same cohort	Frequency of surveying new cohorts
Australia Australian Graduate Survey/ Beyond Graduation Survey	Census	AGS Cross sectional: One year after graduation.	BGS Longitudinal: 2 years after AGS and again 2 years later	Annually
Australia 2008 Graduate Pathways Survey	Census	Longitudinal: one year after graduation	3 years and 5 years following completion`	Another survey has not been carried out
Canada National Graduates' Survey/Follow-up of Graduates	Random sample	NGS cross sectional: two years after graduation	Follow-up of Graduates (FOG): five years after graduation	Every five years.
Colombia Encuesta a Graduados (Graduate Survey)	Census	Cross-sectional: Students close to graduation, students one year out, students three years out and students five years out from university.	NA	Annually
Germany Graduate Survey	Census	Longitudinal: one year post completion	5 years and then 10 years later	Every four years
Hungary Graduate Tracking Research	Random sample	Cross sectional	NA	Annually
Malaysia Higher Learning Institutions Tracer Study	Census	Cross sectional: 4 to 6 months post-graduation	NA	Annually
Singapore Graduate Employment Survey	Census	Cross sectional: Six months after completion.	NA	Annually
Switzerland Swiss Graduate Survey	Census/those who participated in first wave	Longitudinal: 1 year after graduation	Follow-up: 4 years later	Every two years (odd numbered years)
United Kingdom DLHE/DLHE Longitudinal Survey	Census/Sample of DLHE respondents	Cross sectional: Six months after completion	Longitudinal: Up to 3 years after DLHE.	Annually
United States Baccalaureate and Beyond Longitudinal Study	Representative sample	Longitudinal: one year after graduation	Generally three years later (but depends)	Three cohorts covered since 1994
United States National Survey of Recent College Graduates [12]	Phase I: Sample of institutions Phase II: sample of graduates from those institutions	Cross sectional	NA	Every two years

Content of Surveys

All of the surveys examined here collect demographic data with the exception of the Graduate Employment Survey in Singapore which focuses only on student employment

information and the Destinations of Leavers from Higher Education (DHLE) survey in the UK, as this data can be linked to additional student data (including demographics) that all higher education institutions are mandated to collect.

While the topics covered in graduate surveys are clearly closely tied to the purposes of the surveys themselves, almost all of them ask a combination of student perception questions (quality of their program, its usefulness for finding a job or going on to further study and/or their satisfaction with the job they were able to find after graduation) and factual questions such as their present employment status and wage level.

Table 3 shows the topics covered by each survey using the topic key below the table and whether they are included in that survey instrument or not. The topics on the left side of the bold line involve the graduates' perceptions while those on the right side involve the more factual topics.

Table 3. National Level: Topics covered

	Graduates' Perceptions								Graduates' Position at Time of Survey (Factual Information)							
	DEM	SAT	UE	UG	CST	REA	REA 2	JST	GRD	SF	SG	EMP	JOB	NJ	WG	LN
Australia Australian Graduate Survey	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	YES	NO
Australia Beyond Graduation Survey	YES	YES	YES	Yes	NO	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES	NO
Australia Graduate Pathways Survey	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO
Canada National Graduates' Survey/Follow-up of Graduates [10]	YES	YES	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES
Colombia Encuesta a Graduados	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO
Germany Graduate Survey	YES	YES	YES	YES		NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO
Hungary Graduate Tracking Research	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
Malaysia Higher Learning Institutions Tracer Study	YES	YES	YES	NO	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES	NO
Singapore Graduate Employment Survey	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	NO	NO	YES	NO
Switzerland Swiss Graduate Survey	YES	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	NO
United Kingdom DLHE/DLHE Longitudinal	NO*	NO	YES	NO	NO	NO	YES	NO	YES	NO	NO	YES	YES	YES	YES	NO
United States B&B Longitudinal Study	YES	NO	NO	NO	YES	NO	NO	YES	YES	NO	NO	YES	YES	NO	YES	YES
United States National Survey of Recent College Graduates	YES	NO	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO

Content Key:

- DEM: demographics,
- SAT: graduate satisfaction with education and degree received,
- UE: grad perception of usefulness and relevance of education for grad studies/job,
- UG: graduate perception of usefulness of university studies for finding employment,
- CST: was degree worth the cost
- REA: reasons for taking current job
- REA2: reasons for going on for additional education
- JST: job satisfaction
- GRD: grad studies pursued if any
- SF: length of school to work transition (first job)
- SG: length of school to work transition (good job)
- EMP: employment status
- JOB: type of job
- NJ: number of jobs before present one or to present unemployment
- WG: wage levels
- LOAN: student loan repayment
- *linked to HESA student record where attributes such as gender available.

The surveys in most of the countries have a fairly even balance between questions asking about graduate perceptions and those asking for present employment details, but some are more heavily tilted in the latter direction. Each of the 13 surveys² has a question on the graduate's employment status and earning level and 12 have questions on the type of job they have, but not all of the surveys have questions on the graduates'

perception of quality in their higher education program or on the usefulness of their program for finding employment. The Australian Graduate Survey, and the Canada National Graduates' Survey and Follow-up of Graduates Survey, for example, have more of an employment emphasis and the Singapore Graduate Employment Survey and the Swiss Graduate Survey have no survey questions at all involving graduates perceptions and only questions about their present employment and salary and about the length of time it took to find a job.

²The Australian Graduate Survey and Beyond Graduation Survey have different questions so are treated separately in Table 3.

Feedback Loop

Given that the provision of information (to policy makers, to faculty and administrators, to prospective students) is the general purpose of graduates surveys, a critical element in meeting this objective is the extent to which robust channels are in place to feed that information back to where it is needed. In Australia, the GCA provides institutions with some initial analysis in the form of standard frequency tables which are supplied along with their cleaned institutional data. The institutions can then analyze their own results and use their findings to shape their future planning. In Colombia, the collected information is integrated with the information systems of the Ministries of Social Protection and Finance, but the individual universities may access the responses of their student. In the UK, much of the DLHE data is linked to the HESA student record.

Most countries also put out reports aimed at different audiences with summaries (or sometimes the data itself) of findings. The GCA, for example, puts out a series of annual national reports based on the results of the AGS. The reports are aimed at meeting the needs of as many users as possible by including a discussion and summary of national results (for all users), simple tabular and graphical description at aggregated field of education level (for example, for careers advisers and students), and more detailed results (for example, for academics, educational researchers, government departments).

3. SUB-NATIONAL SURVEYS

Author and Purpose of Research

The actors involved in sub-national graduate surveys also vary greatly as surveys are funded and carried out by states or provinces, by university systems and by associations of universities and NGOs. Some surveys such as that conducted by the Maritime Provinces Higher Education Commission (MPHEC) [12], a publicly funded inter-provincial agency in Canada, cuts across several jurisdictions, while others such as the BC Stats' Baccalaureate Graduate Survey [13] (conducted for BC Student Outcomes Research Forum) look at all higher education institutions within one jurisdiction. In the United States, some state university systems such as the University of Wisconsin system and the University of Alaska [14] conduct surveys of graduates from all of their constituent institutions. A number of not for profit agencies and associations representing universities carry out national graduate surveys or coordinate their administration with member institutions. In New Zealand,

the new Graduate Longitudinal Study [15] is being commissioned by Universities New Zealand, the representative body for all national universities. In Italy, Alma Laurea, a consortium of Italian universities, conducts annual graduate surveys on behalf of its members and makes institution level data available [16], while in Germany, 52 individual universities carry out a common graduate survey on an annual basis under the coordination of the International Centre for Higher Education Research (INCHER) at the University of Kassel [17]. INCHER provides training for the participating institutions and is also working with several other countries to develop institutional networks in which institutions are provided technical support to collect common graduate outcome data that can be pooled at the national level.

Like the national level surveys, the sub-national surveys have different combinations of objectives for which they are conducted. Table 4 shows which of four common graduate survey purposes (as defined under Table 1) are pursued in some of the sub-national surveys mentioned above.

All of the sub-national level surveys focus on providing data to institutions for use in future planning, curriculum design and program and services improvements. Two of them also provide information to policy makers, two provide information to prospective students and two collect data for assessment purposes.

Methodology

Table 5 shows the different methodologies and time periods used by the sub-national surveys. Most are censuses seeking responses from all students within their jurisdiction. Three of the surveys are longitudinal and follow up with the same students two to five years after graduation. The new Graduate Longitudinal Survey that is just getting underway in New Zealand (as of September 2011) will survey a sample of final year students and then follow up with them after two, five and ten years. Five of the six surveys are carried out annually, while the MPHEC is carried out every four years.

Content of Surveys

Most of the sub-national surveys examined here collect demographic data with the exception of that in Alaska. Table 6 shows the topics covered by each survey using the topic key below Table 3 and whether they are included in that survey instrument or not. As with the national surveys, the topics on the left side of the bold line involve the graduates' perceptions while those on the right side involve more factual topics. Five of the seven surveys collect both perceptual and factual information, while one (Alma Laurea) collects only factual information.

Table 4. Sub-national Graduate Surveys

Actor and Instrument	Type of Institution	Purpose/s
Maritime Provinces Higher Education Commission (MPHEC) Survey	Publicly funded inter-provincial Agency	1,2,4
BC Stats for the BC Student Outcomes Research Forum Baccalaureate Graduate Survey	Legal entity representing interest of ministry and all participating institutions	2,3,4
Alberta Advanced Education and Technology (Government of Alberta) Alberta Graduate Outcomes Survey	Provincial government agency	1,2
University of Alaska Graduate Survey	University system	2
Alma Laurea Survey on Graduate Employment (Italy)	Consortium of Italian universities operated with some support from the Ministry of Education	2,3
INCHER-Kassel KOAB Graduate Survey	International Centre for Higher Education Research (INCHER) Kassel at the University of Kassel (Germany)	2

Table 5. Sub-national Level: Sample Frame and Periodicity

Instrument	Census vs. Sample	Periodicity		
		First interview	Timing of follow-up with same cohort	Frequency of surveying new cohorts
MPHEC	Random sample	One year after graduation	Five years after graduation	Every four years
BC Baccalaureate Graduate Survey	Census	Two years after graduation	Five years after graduation	Annual
Alberta Graduate Outcomes Survey	Census	Two years after graduation	NA	Annual
University of Alaska Graduate Survey	Census	Graduates 3 months to 1 year after graduation	NA	Annual
Alma Laurea	Census	One year after graduation	Three years and five years after graduation	Annual
INCHER-Kassel KOAB Graduate Survey	Census	1.5 years after graduation	NA	Annual

Feedback Loop

All of the survey results are made available to the participating individual institutions for their use. The MPHE Commission offers complete survey package to each participating institution and province with a custom data file containing responses from the institution's or province's graduates and makes the aggregate report publically available on its website. The BGS and Alma Laurea survey results are available on-line by year,

institution and discipline though each university retains ownership of its data. Similarly, the University of Alaska report on the graduate survey contains institution specific data. INCHER-Kassel makes an institution-specific comparative analysis available to each participating university and publishes reports using the aggregate data. It also organizes workshop for participating universities on how to interpret and learn from the data.

Table 6. Sub-national Level: Topics Covered

	DEM	Graduates' Perceptions							Graduates' Position at Time of Survey (Factual Information)							
		SAT	UE	UG	CST	REA	REA 2	JST	GRD	SF	SG	EMP	JOB	NJ	WG	LN
MPHEC Graduate Follow-up Surveys	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
British Columbia Baccalaureate Graduate Survey (BGS)	Y	Y	Y	N	N	N	N	N	Y	N	N	Y	Y	N	Y	Y
Alberta Graduate Outcomes Survey	Y	Y	Y	Y	Y	N	N	N	Y	N	N	Y	Y	N	Y	Y
University of Alaska Graduate Survey	N	Y	Y	Y	Y	N	N	N	Y	N	N	Y	Y	N	Y	N
Alma Laurea Survey on Graduate Employment	Y	N	N	N	N	N	N	N	Y	Y	N	Y	Y	N	Y	N
INCHER-Kassel KOAB Graduate Survey	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N

4. CONCLUSIONS

There is growing attention to the instruments that can be used to measure higher education quality given public funding limitations, the shifting of much of the cost of higher education to students and their families and the mounting demand for public accountability and responsiveness. Graduate surveys are one of the instruments that are becoming increasingly common, because they provide concrete information that is useful for a wide variety of stakeholders including policymakers, faculty members and administrators and prospective students and their results can also be used for benchmarking institutional performance over time and against other similar institutions. As long as they are performed with the recognition that not all institutions have similar student bodies, nor are they offering the same kinds of education, graduate surveys can be a cost-effective (especially when carried out through inter-agency and institutional cooperation), reliable method for assessing higher education quality and suggesting policy reforms and curriculum changes that may be needed at the national and institutional levels respectively.

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