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Foreword by the Secretary General

This Data Strategy will provide an important contribution to the ongoing development of the evidence-base for education policy in this Department. Underlying decisions on resource allocation is a wide range of information and data that is collected through various means. Making better use of existing data as well as introducing new and essential sources of information is a key goal for the Department as it seeks to provide services in an increasingly diverse and challenging environment. This Strategy outlines a number of short-term goals and actions to improve the quality and supply of data. It is not possible to address every data need all at once. However, it is possible to identify a number of key priorities – one of which concerns the development of a Learner Database at Primary level. The development of such a database could transform the potential for data to inform policy and serve learners, schools and communities more effectively. We look forward to a continuing dialogue with all data users and providers in the education field as we advance our efforts on this front. This Data Strategy will provide important direction to our work.

Brigid McManus
Secretary General

Department Mission Statement

The mission of the Department of Education and Science is to provide for high-quality education, which will:

- enable individuals to develop their full potential and to participate fully as members of society,

and

- contribute to Ireland's social, cultural and economic development.

Data Objective Statement

The Department of Education and Science will strive to provide high-quality, relevant and timely statistical information relating to all levels of education within its remit in order to contribute to the development of policies and services to the public and to meet the needs of learners, education providers and other users of education data, nationally as well as internationally.

Tá leagan Gaeilge den Ráiteas seo le fail. Is féidir é a iarradh ó Rannóg Staitistic sa Roinn Oideachais (guthán 01 889 6588)

High-Level Goals (2008-2010)

1. To improve the quality of information at all levels of education by developing database systems that can link information on the characteristics and needs of individual learners from pre-primary to higher and further education.
2. To improve the quality of information on teachers and other staff at all levels of education.
3. To maintain the highest standards of data quality, personal confidentiality and appropriate governance arrangements for the management of data within its remit with a view to minimising the burden on data providers and meeting the needs of all users.
4. To upgrade and enhance the provision of statistical information in a timely, relevant and accessible way through web-based and other forms of dissemination to serve the information needs of all users.
5. To ensure that data on education in Ireland are provided to the Statistical Office of the European Union as well as other international organisations.



Introduction

Section 1

1.1 Overall Department Strategy 2008-2010

The provision of timely, policy-relevant and high-quality data is a vital foundation for decision-making in this Department. The mission of the Department is *'to provide for high-quality education, which will:*

- *enable individuals to develop their full potential and to participate fully as members of society, and*
- *contribute to Ireland's social, cultural and economic development.'*

The Strategy Statement outlines a number of high-level goals:

- *Support and improve the quality, relevance and inclusiveness of education for every learner in our schools;*
- *Enhance opportunities in further education and youth services;*
- *Sustain and strengthen higher education and research; and*
- *Support the delivery and development of education through policy formulation, quality planning and a strong customer focus.'*

The purpose of this Data Strategy is to indicate a number of high-level goals on data for the coming three years as well as a limited set of more specific actions to contribute towards these objectives – within the constraints of likely resources and taking account of various policy information priorities. The Strategy is also part of a broader public service endeavour – to improve information relevant to social partnership, social inclusion, national competitiveness, international performance benchmarking and public service reform. Through its support and funding for over 4,000 schools, colleges and educational centres, the Department is a key gateway for information and data on close to one million students or pupils, 90,000 staff employed across the education sector and a total expenditure of over 5% of national income.

As a Member State of the European Union, we have an important role to play at the international level in contributing to Europe's goal of becoming 'the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth, with more and better jobs and greater social cohesion.'¹ Indicators and benchmark reference levels for European Union average performance provide an important input to the open method of co-ordination by which Member States cooperate and learn from each other. Since 2003, European benchmark indicators have been agreed as reference points for measuring progress towards the realisation of the Lisbon objectives for education in 2010 in the following three key areas:

- *Improvement to the quality and effectiveness of EU education and training systems;*
- *Accessibility of education and training to all; and*
- *opening up of education and training to the wider world.*

¹ Presidency Conclusions, Lisbon, 2000, Paragraph 37.

1.2 DES Data Strategy Preparation

The Department of Education and Science is represented on the inter-departmental Data Strategy Liaison Group, chaired by the Department of the Taoiseach, to assist in pooling information and assisting Departments in the development of their Data Strategies.

Arising from a decision of Government in 2006, each Department of Government was required to draw up a Data Strategy in 2007. A Data Strategy Group of this Department was established in April 2007. Its Terms of Reference are outlined in 1.3 below. The Group, which was representative of a range of policy and administrative sections in the Department, met three times over a six month period².

The Group consulted with a range of Business Units of the Department as well as a number of external agencies under its aegis. In addition, it consulted with 6 agencies under the aegis of this Department: Higher Education Authority, National Qualifications Authority of Ireland, National Educational Welfare Board, the State Examinations Commission, the National Council for Special Education and the Teaching Council. Consultations also took place with the Office of the Minister for Children and FAS. Other consultations took place with the Educational Research Centre and the Economic and Social Research Institute as well as a number of recognised Education Partners with a particular interest in the supply or use of data. It is intended to continue the process of consultation – over the coming three years – on the implementation of the Data Strategy with a wider range of data users and providers.

Preliminary work had been undertaken by the Central Statistics Office in 2003 leading to the publication of The Statistical Potential of Administrative Records (SPAR). This Report contained a number of detailed recommendations addressed to this Department (outlined in Appendix 1 of this document). Prior to this, in 2002, as part of the work of the Steering Group on Social and Equality Statistics, a detailed inventory of data sources and needs with particular reference to statistics on equality was drawn up. This information has been updated as part of the Data Strategy preparation process in 2007 and will be made available on the Department of Education and Science Website in early 2008 (www.education.gov.ie and refer to Statistics).

The consultation process around the Data Strategy as well as the development of an inventory of data sources and needs constituted a first part of a Department-wide Feasibility Study on the development of a Learner Database.

² Guidelines for best practice in the preparation of Department Data Strategies are outlined in Appendix 2 of this document..

1.3 Terms of Reference of DES Data Strategy Group

- i. Review the (i) collection, (ii) processing and (iii) dissemination of data by this Department and its associated agencies with an overview of the main data holdings (electronic or otherwise) and forms of dissemination and publication;
- ii. Agree on a number of key priority areas to inform policy development taking account of T2016, NAPS, National Development Plan, EU benchmark indicators, Equality legislation, School attendance, Traveller Education and other policy initiatives;
- iii. Identify key weaknesses and gaps in relation to:
 - *Timeliness of information;*
 - *Linkage and compatibility of data* across various holdings (Post-Primary Pupils Database, State Examination Commission, Central Applications Office, Student Record System at Third Level);
 - Relevance and possible *duplication of data* requests to schools and education providers;
 - *Accessibility* of data from the point of view of data users;
 - *Broadening of data* coverage in key areas of policy concern – for example nationality, language support, ethnicity, socio-economic background, disability; and
 - *Standardisation, where appropriate*, on CSO coding systems (e.g. socio-economic and demographic information).
- iv. Propose a number of short-term changes over a 3-year period that are cost-effective and urgent from a policy and administrative point of view.

1.4 Structure of this Report

The policy and user environment is considered in the next Section. The principal data needs and gaps are summarised in Section 3 together with cross-cutting areas such as social inclusion, competitiveness and active citizenship in Section 4. In Section 5, a number of realisable objectives over a three-year period are outlined. The document closes with a consideration of resource issues in Section 6.

By its nature and purpose this Document will focus on areas of strategic development and new data holdings. It should be noted that this Department already holds a huge range of data at aggregate level (e.g. geographical and school) as well as individual (e.g. post-primary pupil database or teacher payroll systems) encompassing administrative, statistical and occasional research purposes. The Department publishes and disseminates data in a number of formats including the Annual Statistical Report and the Department's own website. We also provide a large volume of data to various international organisations that underpin cross-country comparative analysis. These data holdings are summarised in *An Inventory of Data Sources and Needs of the Department of Education and Science*.

Policy and User Environment

Section 2

2.1 A vision for how Information Systems will contribute to public policy on lifelong learning

In this Section, the need for better data provision, access, and processing by data users internally and externally has been underlined as an essential basis for more effective policy development, programme improvement and decision-making in relation to education. The Report on the Statistical Potential of Administrative Records (Central Statistics Office, 2003) has observed that:

There is increased pressure to go beyond statistics of enrolment, teachers and spending - crucial as these are to policy planning and information - and to develop indicators of system performance and quality of educational outcomes, inputs and processes.

A vision for future development of data systems needs to be informed by new ways of looking at public service provision for lifelong learning. Such an approach is already reflected in changes to the curriculum and improvements to school management and leadership. Building on these approaches information systems need to reflect the reality that:

- Learning is a human right and obligation in a fast-changing world;
- Learning is continuous throughout life and not just confined to the classroom;
- The needs and capabilities of the *individual* learner assume greater importance than before.

Traditionally, the focus of information systems has been mainly on schools, institutions, classrooms, teachers, programmes and standardised assessments. However, at the coalface of teaching and learning the focus is already expanding to encompass a greater diversity of provision reflecting multiple needs and changing circumstances. Managers of data systems are being challenged to keep up with this new reality. A case in point relates to provision for learners with special educational needs where a 'one-size-fits-all' approach is no longer relevant.

Given the pace of change in Irish society and public policy there is need to develop new sources of data that can serve multiple purposes in the following areas:

- Characteristics, background, achievements and progress of pupils or students enrolled in formal education;
- Complex information needs of learners, administrators, policy makers and researchers; and
- Linkage of information across different domains, subject to agreed data protection and sharing protocols, in such a way as to maximise the information impact on policy delivery and education practice and, at the same time, minimise the collection, processing and dissemination costs for information providers and users.

2.2 Evidence-based policy

Much of the work on indicators of educational performance has been driven by international comparisons – especially *Education at a Glance* Indicators published by OECD and various publications and web-based releases by Eurostat – the Statistical Office of the European Union. Although much attention has been paid to indicators such as spending relative to national income or the number of students at each level as well as class size and staff-student ratios, there has been a welcome and increasing supply of indicators in areas such as completion, attainment (for example, the percentage of adults or young people with a given level of education) and achievement (how well students fare in maths, science, reading etc).

Useful as indicators can be to inform, stimulate debate and highlight strengths and weaknesses, no set of indicators can serve to fully inform policy development and educational practice. Knowledge and wisdom embedded in communities of learning and teaching practice can only partially be signalled by information contained in indicators. However, indicators are a vital part of the overall basis for policy and practice. Hence, policy developments in areas such as curriculum, programme provision and expenditure need to be informed by indicators of outcomes as well as inputs.

In moving beyond the important and essential supply of statistics on numbers of students, teachers, classes, examination candidates and graduates it is necessary to develop appropriate indicators of (i) a wider range of learning outcomes, and (ii) the relationship between these outcomes and various contributory factors. Historically, indicators of educational performance and activity have focussed excessively on inputs or participation such as expenditure, class size, staff-student ratio, time spent in instruction, access to education at different levels or completion of education to a particular standard or level.

It is not possible to use data to show, conclusively, the *causes* of successful learning or teaching outcomes. The learning process is not a laboratory since it comprises many features that are local, cultural and dynamic in nature – not all of which are measurable. However, use of a range of data on the characteristics of learners, their schools, families and community environment can throw some important light on likely sources of learning outcomes.

High quality data can be processed by users such as the Inspectorate and considered against other very significant evidence in relation to quality in schools that comes from classroom evaluation work and other inspection and research activity. The Department and its associated agencies can then formulate more relevant and informed policy advice in relation to the development of educational services in the system.

At national level, indicators of participation, access and outcomes appear in publications such as *Measuring Ireland's Progress* (Central Statistics Office, 2007) and publications of this Department such as the *Annual Statistical Report*, *Education Trends* and *Sé-Sí: Gender in Irish Education*³.

The Central Statistics Office continues to play a pivotal role in providing official statistics across a wide range of areas of public interest. The Office has a statutory role in the co-ordination of official statistics in Ireland. In particular, it has the authority to ensure that appropriate standard classifications are used for this purpose. To this end, the Statistics Act 1993, 10(2), states that:

³ Details of these and other publications may be found at: www.education.gov.ie and refer to Statistics.

The Office shall have authority to co-ordinate official statistics compiled by public authorities to ensure, in particular, adherence to statistical standards and the use of appropriate classifications.

Given the growing volume of statistical information across all areas of public policy there is a need to focus on a limited set of priority headline indicators to complement this large volume. The European Union education benchmark indicators provide an example that is already incorporated into the annual Key Education Statistics Leaflet published by this Department. These include:

- Proportion of 20-24 year olds who have completed upper secondary education;
- Proportion of 18-24 year olds with at most lower secondary educational attainment and not in further education or training;
- Proportion of the adult population aged 25-64 participating in formal education or organised training; and
- Proportion of 15 year olds with Reading Literacy proficiency of Level 1.

In addition to EU targets, national targets have been set in various policy documents. These include indicators such as:

- Provision of pre-school places;
- Reductions in low levels of literacy at primary level and in the adult population;
- The rate of retention to the end of senior cycle at second level or its equivalent;
- Graduation rates in Higher Education.



Overview of main data needs and gaps

Section 3

3.1 Introduction

A key need which has emerged in recent years is the need for an individualised Database of pupils in Primary schools. This is reflected in the Programme for Government adopted in June 2007 which is committed to:

Maximise the use of IT to cut down on administration and put a database in place to track primary pupils.

As pupils enter school and progress through first and second level it is vital to record information on numbers entering, transferring, dropping-out as well as completing at each level. Moreover, obtaining information at the individual level on school attendance, non-enrolment as well as information on specific learning needs and community and family context is critical to proper policy planning and service delivery at individual pupil level. An example of how information is needed at the individual level is given in the Traveller Education Strategy (Page 97):

Data, in an agreed format that is acceptable to Travellers, should be collected to ensure that the progress of Travellers throughout the education system is tracked, that targets for participation are set, and that appropriate resources are then made available. Where the educational outcome is not reached it should be possible to identify these immediately so that appropriate culturally sensitive interventions can be made.

Currently, it is difficult to provide any complete or accurate account of student flows let alone information on the progress of specific target groups – especially at primary level where there is no individualised primary pupil database currently. The SPAR Report (Central Statistics Office 2003:17) has already noted that: ‘The current sources do not, however, provide an adequate basis for decisions on educational interventions and monitoring at the level of the individual pupil.’ Some of the major gaps identified in our consultations include:

- *Imprecise and poor quality data on school drop-out especially at primary level;*
- *Poor linkage of data from primary through to second level (including pupil transfer);*
- *Absence of socio-economic data to enable policy on social inclusion; and*
- *Incomplete information on special needs.*

Therefore, a priority for this Department in the coming three years will be to progress the development of a comprehensive primary pupil database to complement the post-primary pupil database as well as improvements to the post-primary database to allow for better quality information on student flows.

It will be necessary to relate information on primary pupils to other databases and sources as well as ensure adequate background information on students to facilitate analysis. We need to update and extend data coverage with a long-term aim of including one million learners in a new Learner Database System linking pre-school through Primary level on to second, higher and further levels of

education. In this way it should be possible to evaluate the progress and needs of individual learners as well as put in place more adequate planning on the basis of local and national projected needs. However, it will not be possible to achieve this all at once due to various organisational and human resource constraints. However, a plan to deliver a Learner Database at Primary level within an agreed timeframe is a high priority. In this Section, the main data needs and gaps are outlined. In this Section, the need for better quality information on teaching staff is also discussed and the need for an overarching database of teaching staff in the education sector in the long-run is raised.

3.2 Early childhood

A cohort of just over 60,000 children progress from birth to primary schools via many different paths ranging from formal pre-school provision to informal care at home or other settings. Some data have been collected through the County childcare Committees with the support of the agency Pobal. The Central Statistics Office has also collected information through periodic special modules of the Quarterly National Household Survey. Published results from these modules provide information on the scale and type of early childhood care as well as costs and take-up by different groups in the population. However, there is no regular, single or comprehensive source of information on the number of children in various settings and how the take-up of various pre-school arrangements is distributed. A key policy indicator need is for information on the proportion of new entrants to primary schools that have attended some form of early childhood education (and distinguishing by type and setting). More specifically, information is needed on how much targeted pre-school education is provided to children from urban primary school communities covered by the *Delivering Equality of Opportunity in Schools* (DEIS) action plan.

3.3 Primary and Second level

The main source of statistical information on pupil enrolment at primary level is the annual Department of Education and Science Census of Primary Schools undertaken at the end of September each year. This Census covers over 3,200 schools including 125 Special Schools classified as National Schools. The Census is carried out by the Department's Statistics Section. Detailed information on enrolment is collected. This information is classified by sex, age, class, standard, medium of instruction. Data are also collected on the total number of pupils entering, repeating and leaving the primary school. In the case of entrants and leavers, the information is classified by various categories of sources or destinations. Numbers of teachers in each school are also collected as part of the Census of Primary schools. Data are also collected in respect of pupils in Special Schools.

Separately, the Primary Administration/Payments Section of the Department collect information from National Schools on educational provision for non-English speaking pupils. The information collected refers to pupils by name, date of birth, date enrolled in school (for the first time), country of origin, class in which enrolled, English language level⁴, and, if applicable, the length of time the pupil has been in receipt of either grant assistance or had the benefit of a Language Support Teacher. The

⁴ Code 1 refers to 'Very poor comprehension of English and very limited spoken English', and code 2 refers to 'Understands some English and can speak English sufficiently well for basic communication'

Primary Payments Section of the Department receives quarterly returns from primary schools. These returns contain data on teachers in each school as well as a preliminary count of pupils on 30 September each year.

The Post-Primary Pupil Database has been in operation since 1991. It holds data on all students from entry to Second level to Post-leaving Certificate. Data fields include basic demographic information as well as subjects studied.

Information is also collected on characteristics of each second level school. Data on individual pupils are linked across years in order to estimate numbers entering and leaving schools as well as rates of retention to Leaving Certificate in respect of any cohort of students entering the system 5/6 years previously.

A considerable volume of data is also collected by the 33 Vocational Educational Committee Schemes in respect of enrolment, staffing and expenditure in colleges, schools and other educational centres administered by the VECs. Individual VEC schools provide data for the Post-Primary Pupil Database.

The absence of a Primary Pupil Database limits the quality of information available to support various policy planning and public service delivery functions. Examples of areas impacted are:

- Rates of progress, drop-out or repetition at primary level by school, gender, socio-economic status and ethnic background;
- Percentage of pupils at different class levels in national schools with diagnosed specific learning disabilities, and level and intensity of support being provided;
- Monitoring of participation, enrolment, progression, achievement and attendance in respect of various categories of at-risk children in primary schools; and
- Number of children who fail to transfer from primary to second-level education, with specific data for children from overseas and the traveller community.

3.4 Special Education

Special education needs (SEN) are defined in the *Education for Persons with Special Educational Needs Act 2004* (EPSEN) in the following way (Section 1)

...special educational needs' means, in relation to a person, a restriction in the capacity of the person to participate in and benefit from education on account of an enduring physical, sensory, mental health or learning disability, or any other condition which results in a person learning differently from a person without that condition ...

It should be noted that some agencies (such as the OECD, for example) use a wider definition, than that implied in the EPSEN Act, of special educational needs to include exceptionally able students as well as students from socio-economic disadvantaged backgrounds.

Currently, statistical information collected by this Department on SEN is confined to the following three areas:

- Aggregate information on total number of pupils in ordinary primary schools taught by a Special Class teacher (classified by age, sex, type of special learning need, entry source and destination code); and
- Aggregate information on total number of pupils in Special Schools (classified by age, sex, type of special learning need, entry source and destination code); and
- Information collected at Second Level.

Special educational needs is a particularly complex, sensitive and expanding area of information interest. Data users need to know how many learners have a special education need, what it is, where SEN learners are, how they compare with other groups and when they complete full-time education. The present supply of data does not adequately reflect the growth in the range of low- and high-incidence special learning needs as well as the need to classify all pupils with special learning needs by various other features such as age, social, ethnic background etc.

It is envisaged that most of the new information required in relation to SEN will be provided under the SEAS (Special Education Administration System) currently being developed by the National Council for Special Education.

3.5 Further Education

Further education covers a wide range of learning settings from Post-Leaving Certificate courses in second level schools to Adult Literacy Services, Back-to-Education Initiative (BTEI) provision, Vocational Training Opportunity Scheme (VTOS), Senior Traveller Training Centres (STTC) and Youthreach as well as apprenticeship training and other types of training (FAS, Fáilte Ireland, BIM).

Given the disparate nature of Further and Adult Education it would be desirable to link these together in one single information system. Exploratory work was undertaken in relation to a Further Education Management Systems (FEMIS) in 2001. However, it has not been possible to implement this. Some key weaknesses in the current situation are:

- lack of individualised tracking information beyond second-level as well as linkage to FAS or other database systems; and
- absence of comprehensive information on background, progression and learning outcomes of adults taking part in VTOS, Youthreach, BTEI, STTC and other programmes.

3.6 Higher Education

Through the Student Record System (SRS), the Higher Education Authority has already begun to collect data on individual students in all HEA-designated institutions. Some key data objectives in relation to Higher Education are:

- Full implementation of PPS by 2009/10⁵ for all institutions returning data on an individual student basis through the SRS;
- Inclusion of non-aided Higher Education institutions in HEA Data collection from 2007 onwards⁶;
- Development of student tracking based on SRS to measure completion rates; and
- Development of new indicators on socio-economic, disability and ethnicity characteristics on the SRS with effect from 2007/08.

⁵ The Census date for Higher Education Institutions is 1 March each year. Hence, data for 2009/10 refer to 1 March 2010.

⁶ Data collection from non-aided colleges will not be part of the SRS and will be on the same basis as was the case when DES collected data from the non-aided sector up to 2006/07.

3.7 Payroll and Staffing data

There is a large and growing number of staff employed in all levels of education. Notwithstanding the important recent developments in the establishment of an Online Claims System (OLCS), enabling schools to communicate information online with the Department, significant information gaps remain – for example in relation to the distribution of teachers by qualification, experience, cumulative service and subject qualifications in the case of second level. However, the Teaching Council is currently putting in place a Register of all teachers at primary and second level. This Register will contain key fields such as name, address, PPSN and qualifications. It will be possible to generate new statistical tables showing *aggregate* information on a range of teacher characteristics.

Data systems are needed to identify teacher qualifications, eligibility to teach and service history. These data should link with school and teacher assignment records and be accessible to individual teachers, school management as employer as well as the Inspectorate in order to report on appropriate assignment of teachers in schools. The information should also be available, in aggregate form, to the Teaching Council as well as other Business Units in this Department to facilitate policy-planning in relation to teacher supply and demand.

The Online Claims System (OLCS) was rolled-out to all second level schools in 2006 and is now being rolled-out to all Primary Schools with a target completion date of March 2008. The system records all absences of teachers and non teaching staff employed within the approved allocation in primary secondary and community/ comprehensive schools. Claims for the payment of substitute and part-time teachers are made on line using this system. It is envisaged that the online system will be developed further in the future to enable other types of data and appointments to be input on line at school level.

Information on pensioners who have served as teachers or other staff in the education sector needs further development. Currently, there is no single systematic record of Teacher Service history. Pensions section is drawing on information received from the live Primary and Second-Level payrolls as well as paper-based information provided by schools. With the development of a Teaching Staff Database based on PPSN⁷ it should be possible to link teachers in service with those currently on leave or those who have retired.

At Higher Education level, data on teaching staff are held by individual institutions and collected in aggregate form by the HEA. There are no plans to develop a central database of staff in higher education. However, the HEA will review current data holdings and needs in relation to statistics on staff in the sector.

⁷ A complementary and universal unique personal identifier on the Database additional to PPSN would also be desirable to reinforce identity checks in the case of possible difficulties with respect to PPSN in a small minority of cases.

Cross-cutting Data Issues

Section 4

4.1 Overview

A number of key issues and problems with data holdings have emerged in our consultations to date. Principal among these are:

- Limited linkage from one data holding to another;
- Lack of information on what happens to specific groups or individuals through time; and
- Lack of key demographic, social and learning need information in relation to specific groups or individuals of use in policy planning and service delivery.

A vital requirement in addressing these cross-cutting issues is the development of a unique learner identifier in tracking individuals through time as well as in relating different items of information on the same individual from different sources – subject to appropriate data protection measures. The Personal Public Service Number (PPSN) is clearly the most efficient numerical identifier to use since it, potentially, links information to other public data holdings and can serve as an effective way of correctly identifying individuals across a number of policy interfaces from education to health, training or employment.

4.2 Personal Public Service Number

The development of the *Personal Public Service Number* (PPSN) in recent years provides a crucial platform for new information systems. It should be possible to link information about children from soon after birth (when PPSN is generated and disseminated) to their progress through early childhood education and care, primary, second and further/higher education where applicable and ultimately to other areas such as employment and health.

Second level education is the only area where tracking takes place – but even there information is confined to subjects studied by individuals as well as basic information about the pupil (age, sex, home address etc). Information is not available on a wider set of characteristics of individuals and this information cannot be tracked through with the individual pupil as she/he progresses through primary level and on to second level. Hence, it is not possible, for example, to assess the impact of special interventions on pupils from disadvantaged backgrounds or pupils with special learning needs.

As the SPAR report already pointed out (CSO, 2003: 20):

...in order to target disadvantaged children, one must first identify them. In order to assess the effectiveness of the targeted educational interventions, one must have the capacity to measure the outcomes for those individuals. In other words, there needs to be a strong capacity for longitudinal tracking of individuals through the education system – and beyond.

Hence, the use of PPSN at all levels of education from Early Childhood up to higher education and beyond is vital to the development of a comprehensive data tracking system subject to agreed data-sharing and protection protocols. Such an approach avoids asking data providers many times over for the same information and enables data users to capture a much wider and more rich set of information on schools, classes, groups within the education system (such as special educational needs). It is not necessary that the identity of individuals be revealed to data users (beyond those who strictly need to know) because:

- Secondary use of information can be treated in such a way as to anonymise personal information on individuals such as PPSN, home address and other characteristics; and
- For the purposes of reporting or analysis it is sufficient to show aggregate figures at some level such as class, school or geographical location – in a way that does not identify individuals or small groups.

Hence, individual data collection and storage is separate from the aggregation of such information into statistical trends, and distributions in a way that does not identify any individual.

4.3 Data Protection

A clear and open data protection policy is needed to address specific questions and issues that are likely to arise in relation to the statistical and administrative usage of data. Confidentiality and privacy must be safeguarded alongside the needs of effective administration and policy research. Data Protection legislation as well as guidelines provided by the Data Protection Commissioner shape practice in this area. These requirements can be met by guaranteeing confidentiality, to the extent appropriate, in particular when data are being used for purposes other than the primary purpose of initial collection. Collection and use of data will be guided by the following principles:

- Protection of privacy for individual learners and staff working in the education sector and maintenance of integrity against secondary use of data in ways not intended⁸;
- Where necessary and subject to agreement with data providers and users the inclusion and identification of various groups in data collection and dissemination by virtue of their recognised status or identity under existing Equality legislation; and
- Sensitivity and consultation with various groups in relation to language or terminology around questions and categories adopted in statistical forms.

⁸ Secondary use of data refers to situations where data might be obtained for one purpose but then used for another or, alternatively, transferred to another user for the same or different purpose as originally stated when the data were collected.

4.4 Co-ordination and management of data

A key issue identified in the course of our consultations was the need for a much improved set of governance arrangements for the collection, processing, managing and transmission of data within the Department.

In particular, key weaknesses were identified with regard to the segmentation of data holdings in various administrative sections of the Department, the lack of linkage from one data holding to the other, the existence of parallel and sometimes duplicating requests for the same information from schools, the lack of clarity in relation to responsibility for various items of information and data and their updating, and the difficulty in accessing data from particular databases. These concerns will be addressed in Section 5 under Specific Action III.1 (Central Data Quality Unit)

4.5 Socio-economic status (individual learners, schools, communities)

The delivery of programmes to assist learners from disadvantaged backgrounds has assumed increased importance over recent years with the DEIS initiative and other interventions. The nature of educational disadvantage is multi-faceted and complex and may embrace a range of factors at individual, local and community level. In order to target areas of disadvantage and need (as well as capacity) it is necessary to develop a series of measures of disadvantage based on indicators that can be applied in a uniform way across different locations. Measures such as school completion rates, literacy scores for at-risk pupils and proportions of pupils coming from families with medical cards are considered as likely criteria for measuring need across schools. However, in the future, it is desirable to base these criteria on more objective information linked to the communities and families from which students come. Other countries in the OECD have employed measures such as average income levels in small Census areas in which pupils live. Still, other countries record information on the occupational background of parents or guardians as a way of measuring socio-economic background in contrasting schools⁹. In an Irish context, it is not possible at the present time to use Census data or other large-scale surveys for this purpose given the lack of individualised data at primary level as well as the absence of precise local area coding linking schools and residential areas.

In the interim it will be necessary to continue the practice of surveying schools on their needs and characteristics with a view to establishing their likely relative position in learning need arising from socio-economic disadvantage. In the long-term, however, consideration will be given to a more objective approach that draws on data for medical card eligibility at the school or individual family level as well as other indicators of socio-economic background. This approach will not be possible at primary level until such time as a pupil database is established there and at second level until such time as individual student data can be linked effectively with data from external sources via the PPSN.

However, a start can be made through the development of standardised entrant forms that capture essential and relevant information on a pupil entering the system for the first time.

⁹ In New Zealand, data are matched from various sources to measure the average level of socio-economic need in schools.

4.6 Other Equality issues

Equality legislation prohibits discrimination on nine grounds: gender, marital status, family status, sexual orientation, religion, age, disability, race, and membership of the Traveller community. The collection of data on equality is a requirement for the proper discharge of our responsibilities under various items of equality legislation [Equal Status Act, 2000 and Employment Equality Act, 1998]. This arises from a need to ensure equality of treatment and opportunity for different groups as well as to assess the impact of various programmes or interventions (refer to Appendix 3).

Ethical issues arise in relation to the designation of learners by ethnic or Traveller status. Individuals and groups have a right to determine and describe their own identity in terms of ethnicity. Where there is a specific resource allocation in respect of particular groups (e.g. students who are from the Traveller community) sensitivity is needed in the way information is collected, used and categorised. While individuals and groups have a right to determine their own identity they should not be compelled to declare it if they do not wish to do so. The Traveller Education Strategy has noted (10.7):

Travellers should have the option of self-identification where such data are being sought within an equality framework.

Currently, the Department collects information on Traveller children in the following ways:

- Totals of pupils at primary level who are taught by a Resource Teacher for Travellers;
- Totals of students at second level identified by Post-Primary schools as Travellers (not part of the Post-Primary Pupil Database).

In the case of Primary level pupils from the Traveller community are now fully integrated into Ordinary Classes but, at the same time, most are taught by Resource Teachers for Travellers. Details on enrolment, age, sex for these pupils are collected on a special form issued to primary schools by the Statistics Section of DES.

Ireland is becoming an increasingly diverse society with over 160 nationalities represented in our schools. This positive development poses challenges in terms of inter-culturalism and appropriate provision for different needs especially when newcomers are concentrated in particular areas or schools. In some schools and geographical areas the proportion of newcomers is known to be well in excess of 60% and is growing over time.

There is a need to know the level and distribution of newcomers across our schools, to assess trends over time as well as concentrations of pupils who are likely to have different learning needs – especially but not exclusively linguistic. There is a multiplicity of policy information needs ranging from provision of special language support to catering for specific cultural minorities. The National Action Plan Against Racism (NAPR) has recommended as follows (4.9):

Evolve education related data/statistical systems to make reasonable accommodation of cultural diversity and take positive action measures.

Information on nationality background of pupils and their families was collected at primary level through a questionnaire used by the Educational Research Centre as part of the process of identifying schools for inclusion in the DEIS programme in 2005. At second level information is available on nationality of pupils – however this field is defaulted to Irish nationality when no indication is given of nationality and the reliability of information across schools is open to question.

4.7 Spatial dimension (postal and geo-codes)

Good quality and precise information in relation to location is highly valuable for planning and the correct identification of school catchment areas. To this end, the Department of Education and Science attaches high importance to the early introduction of an agreed geo-coding or postal code system to identify and classify small areas. Grid co-ordinate data are already held at address level in the GeoDirectory database. As the National Statistics Board (NSB) has noted¹⁰:

....postcodes could be used to identify and spatially map the location of schools, housing, business premises, and for epidemiological research. They would assist the formulation and analysis of cross-departmental service provision by the public sector. They would facilitate the compilation of the small area data required by Government, and society generally, for developing and analysing economic, social and environment information.

NSB have also commented that postcodes would facilitate analyses of the geographical distribution of income, poverty, education, ill health, urban expansion, recipients of State payments, internal migration and immigration, and minority groups.

¹⁰ Refer to: http://www.nsb.ie/word_docs/Stat_value_postcodes.doc



Key Objectives and Actions for Data Collection and Processing

Section 5

5.1 Overview

In this Section five 'High Level Goals' are outlined. These address some of the following key problems discussed in the previous Section:

- Absence of individualised data at primary level and need for better linkage across existing data holdings (especially Goal I);
- Lack of an integrated teaching staff database to facilitate analysis of trends and planning (especially Goal II);
- Internal management of data and data quality assurance (especially Goal III);
- Difficulty in accessing timely and relevant high-quality data (especially Goals III and IV);

For each high-level goal, a number of Specific Actions are outlined that contain a commitment that is deemed to be a priority as well as feasible. All Specific Actions describe activities or outcomes that we will seek to undertake and achieve within the period of this Plan (2008-2010) taking account of Government priorities as well as existing or likely resources to deliver on these.

5.2 High-Level Goals

In this Section five 'High Level Goals' are outlined. These address some of the following key problems discussed in the previous Section:

Goal I (Learner database system)

To improve the quality of information at all levels of education by developing database systems that can link information on the characteristics and needs of individual learners from pre-primary to higher and further education.

Specific Action I.1 (Strategic Plan)

We will prepare, within the period of this Plan, a detailed plan for the full implementation of a Learner Database System based on the Personal Public Service Number to encompass early childhood, primary, second and further education levels and linked to higher education and FAS databases as well as children in various centres and not in mainstream schools.

Key conclusions emerging from a first phase of a Feasibility Study on a Learner Database has concluded that:

- The development of an individualised database of pupils at Primary level should take priority over other developmental work;
- The database in respect of primary pupils will constitute Phase I of a Learner database while Phase 2 will cater for second-level pupils (and in so doing replace the existing Post Primary Pupil Database) with subsequent phases facilitating the collection and/or incorporation of data from other sources in respect of pre-primary, higher and further education;
- Pending the replacement of the existing Post Primary Pupil Database, where feasible, some minor additions to the system may be implemented to facilitate the collection of additional information similar to that to be collected in respect of primary pupils in Phase 1 of the Learner database;
- The Learner Database (Phase 1) and, subsequently, the Learner Database (Phase 2) should be linked, where appropriate and necessary, to other public databases outside this Department but should not seek to address the full information needs of agencies such as SEC, NCSE and NEWB – while this Department will share data with these agencies in accordance with Data Protection legislation and guidelines and may provide a single portal for the collection of all pupil data from schools, it will not be responsible for the collection of data on behalf of the agencies; and
- It is envisaged that Phase 2 of the Learner Database will incorporate the Post-Primary element to create one single Learner Database allowing for extra or different fields and tables on the second-level side as required (such as on subjects taken).

The Learners database will be accessible to schools via the Department's esinet portal (www.esinet.ie). This portal was developed as the first phase of the Department's Education Services Interactive (ESI) project and is currently used by schools to access the Online Claims System mentioned earlier. The aim is to deliver applications that will have a common 'look and feel' that are accessible through a single 'Department of Education & Science' portal.

It is envisaged that the existing database systems in the following three Agencies: State Examinations Commission, National Educational Welfare Board and the National Council for Special Education will operate independently of the Learner Database. However, consideration will be given to how schools can upload data to this Department and its associated agencies through a single portal such as esinet.

Consideration will also be given to how children outside the mainstream of formal education will also be included in the Learner Database in the long-term. The National Educational Welfare Board has plans to develop a register of children outside the mainstream school system.

Specific Action I.2 (Learner Database at Primary level):

We will progress the development of a Learner Database at primary level. To meet this objective, we will conduct a pilot application of the Database as soon as feasible building on the developmental work on a primary database already undertaken and following full implementation of the Online Claims System (OLCS) in early 2008.

Specific Action I.3 (full implementation of PPSN)

We will oversee the full implementation of the Personal Public Service Number (PPSN) in consultation with the Data Protection Commissioner across the following individualised data holdings held by DES or Agencies under its aegis by 2010/11 (HEA¹¹, SEC, NEWB, NCSE)¹²:

- *Post-Primary Pupil Database including PLCs (PPPD)*
- *Learner Database (Primary)*
- *Student Record System of the Higher Education Authority (SRS)*
- *State Examinations Commission Candidate Database (SEC)*

Furthermore, agreed information-sharing and data-transfer protocols will be established in consultation with the Data Protection Commissioner and the Central Statistics Office for the following database interfaces:

- *PPPD and the SEC database*
- *PPPD and Further Education databases and those of HEA, FAS, Teagasc, Fáilte Ireland and BIM*

Specific Action I.4 (Standardised information at the point of entry)

We will seek the implementation of a Standardised Entrant form at the point of entry to primary school and second level school. This form will contain basic information to be agreed with the relevant stakeholders. Examples of the type of information that could be included are contained in Appendix 4 of this document.

Specific Action I.5 (Early childhood)

We will adapt the existing Primary Census Forms to capture more comprehensive information on the sources of new entrants to Primary Schools so that the numbers of children coming from various pre-school education and care settings are quantified.

¹¹ The HEA main Census date in 2010/11 will be March 2011.

¹² In a very small number of cases it may be possible that students/pupils will not have a PPSN for some reason. In these cases, consultations will be held with the Department of Social and Family Affairs in relation to what is the best approach to allocating a unique student/pupil identifier.

Specific Action I.6 (Traveller identifier):

In keeping with the recommendations of the Traveller Education Strategy, we will introduce an appropriate and agreed Traveller self-identifier question on the Post-Primary Pupil Database in consultation with all relevant stakeholders¹³.

Specific Action I.7 (Special Educational Needs)

In conjunction with the National Council for Special Education, and following consideration of information needs relating to Special Educational Needs as well as reporting requirements by international organisations, we will establish a standardised set of statistical categories for special educational needs, and apply these at primary and second level in the context of an individualised Learner Database.

Specific Action I.8 (Nationality/language need)

We will adopt the standardised CSO categorisations of nationality and introduce these as standardised items of data at primary and second level. Collection of data on language needs at primary level will be integrated into the Learner Database (Primary).

Specific Action I.9 (Local area coding)

We will further examine the existing options for applying a geo-coding directory for the purposes of locating all schools at primary and second level.

Specific Action I.10 (Database of Student Maintenance Grants)

We will develop through the Department's Higher Education Equity of Access Section a central database in the Vocational Education Committee sector for students in receipt of maintenance grants.

This Database will hold data on individual students who have applied for maintenance grants through each of the VECs and it will be possible to aggregate data to provide national statistics

¹³ Recommendation of the Traveller Education Strategy number 16 (page 61): 'Transfer, attendance, attainment and retention should be monitored by parents, schools, the Visiting Teacher Service for Travellers (VTST), NEWB, DES, and others. Consideration should be given to using the post-primary pupil data-base to assist in this area. Pupils who leave the system should be identified as soon as possible'

Goal II (Staff database system)

To improve the quality of information on teachers and other staff at all levels of education by developing appropriate individualised Staff Database systems.

Specific Action II.1 (Teaching Staff Database)

We will develop a detailed strategic plan for the implementation of a central DES School Staff Human Resources Database that draws together information from the SNA, Teacher and Teacher Pension Payroll databases in respect of staff paid directly by this Department.

This is a significant development and will be approached as follows:

- Step 1 - Define the exact scope of the project and establish potential phases to ensure that the project is manageable;
- Step 2 - Complete a detailed analysis of requirements and prepare a functional specification for the first phase of the project
- Step 3 - Develop and implement the first phase

It is intended to complete step 1 as soon as possible.

Specific Action II.2 (Teaching Council Register)

We will continue to work with the Teaching Council in developing its own database of teachers to facilitate analysis of teacher supply and demand.

Goal III (Data Quality Assurance, Access and Protection)

To maintain the highest standards of data quality, personal confidentiality and appropriate governance arrangements for the management of data within its remit with a view to minimising the burden on data providers and meeting the needs of all users.

Specific Action III.1 (Quality Assurance, access and coordination)

We will establish a Central Data Quality Unit in the Department with the remit to:

(i) oversee data classifications across the Department and its associated agencies to ensure uniformity of coding and categorisation;

(ii) advise on all new data surveys initiated from within this Department or its associated agencies (whether one-off or recurring) with a view to their relevance and their impact on data burden;

(iii) advise Business Units in relation to existing requests for data with a view to cutting out duplication of requests to schools and other data providers;

(iv) maintain a register of data holdings and responsible Business Units within this Department and associated agencies ensuring conformity to standardised data management protocols; and

(v) ensure uniformity of standards and service across the Department in response to requests for information by external and internal users of data.

The Department has begun the process of building new data structures to streamline data stores, remove redundant data and improve data integrity. This new structure is centred on three main data entities, namely educational organisations (mostly schools), school staff and pupils. The aim is to ensure that data is recorded once only and is accessed by the various applications (many of which will be re-developed over time) that reference that data. In order to achieve this, a corporate view of data is essential and business units will collaborate to define data items so that they can be incorporated into the new data structures in a standardised manner. The Central Data Quality Unit will play a key role in liaising with the business units and the IT Unit to ensure that this new data structure is maintained and developed appropriately.

Specific Action III.2 (Data Protection):

All Business Units of this Department that handle data will comply with the Department's Data Protection Guidelines. We will comply with the 'eight rules of data protection'¹⁴.

- 1. Obtain and process the information fairly*
- 2. Keep it only for one or more specified and lawful purposes*
- 3. Process it only in ways compatible with the purposes for which it was given to you initially*
- 4. Keep it safe and secure*
- 5. Keep it accurate and up-to-date*
- 6. Ensure that it is adequate, relevant and not excessive*
- 7. Retain it no longer than is necessary for the specified purpose or purposes*
- 8. Give a copy of his/her personal data to any individual, on request*

Specifically we will ensure that:

- Individuals providing information which will be contained on this Department's databases are made fully aware of the uses to which such information will be put and by whom;

- *The Data Controller for each database states the purpose for holding personal data;*
- *"appropriate security measures shall be taken against unauthorised access to, or unauthorised alteration, disclosure or destruction of, the data, in particular where the processing involves the transmission of data over a network, and against all other unlawful forms of processing" (Section 2(1)(d) of the Data Protection Act (1988));*
- *"the data shall be accurate and complete and, where necessary, kept up-to-date" – (Section 2(1)(b)); and*
- *Uphold right of access to personal data by individuals.*

¹⁴ <http://www.dataprotection.ie/ViewDoc.asp?fn=/documents/responsibilities/3bii.htm&CatID=54&m=y>

Specific Action III.3 (Statistical and IT capacity):

We will work to improve the knowledge and skills at all levels in the Department in relation to statistics and their use in policy development.”

Alongside adequate internal governance arrangements for data management, this Department will continually review its IT resources, software applications and intelligence tools as well as necessary staff training to ensure that various Sections and services of the Department can access and process the data relevant to their core work in the context of policy development or programme delivery.

We will develop a ‘Catalogue of Reports and Queries’ which users can refer to – the catalogue would include a description of the information contained in the reports, who has access to run them, parameters required etc.

Goal IV (Data Dissemination)

To upgrade and enhance the provision of statistical information in a timely, relevant and accessible way through web-based and other forms of dissemination to serve the information needs of all users.

Specific Action IV.1 (web-based dissemination):

We will continue to upgrade and improve the provision of statistical information in a timely, relevant and accessible way through web-based and other forms of dissemination. We will work with the Central Statistics Office to improve the range of relevant indicators provided covering the main areas of public interest and regular demand at:

<http://www.cso.ie/px/des/database/des/des.asp>

as well overhaul the Department’s Statistics web page.

We will provide other statistical reports and analyses such as the Report on Retention at Second Level from time to time on the Department’s website. The list of educational providers currently available on the Department’s website will be overhauled and aligned with existing databases to ensure more up-to-date, consistent and accurate information on all details of school name(s), address and ownership.

Specific Action IV.2 (Other Reports):

We will continue to publish, over the period of this Plan, an Annual Statistical Report together with Key Education Statistics (trends) with the aim of publishing data within 12 months following the end of the latest school-year reported. The Reports for 2006|07, 2007|08 and 2009|10 will be re-organised and streamlined to focus on a more limited number of key indicators and summary statistical tables relating to students, teachers and expenditure at First, Second, Further and Third Level while the web-based facility will provide detailed statistical tables and breakdowns.

The Higher Education Authority will have sole responsibility for the collection of all third level student data from the 2007|2008 academic year. The HEA will continue to publish 'Higher Education Key Facts and Figures' report on an annual basis and within 12 months following the end of the latest academic year. Data will also be available in a user friendly format through the HEA website and in the HEA's Annual Report.

Specific Action IV.3 (Customer Service and response to statistical queries):

We will adhere to the Department's Customer Service guidelines in responding to any queries or requests for anonymised statistical information.

Specific Action IV.4 (Data access within the Department):

Through the Central Data Quality Unit (Specific Action III.1, above) in collaboration with business units we will ensure greater linkage and improved access to data across different holdings within this Department.

Building on the Unified Data Model, access to key information by school, locality and county will be developed on the Department's own intranet. This will allow for direct access to the Post-Primary Pupils Database, among other databases, for the purposes of generating customised reports by the Inspectorate and various Business Units in the Department.

Specific Action IV.5 (Dissemination of Survey data results):

The Educational Research Centre carries out a number of important national and international surveys for this Department including national assessments of English reading, Mathematics and Irish as well as surveys directed at schools in disadvantaged areas.

The Economic and Social Research Institute conducts survey research on school leavers (second level) as well as longitudinal surveys of students in junior and senior cycle and the Growing-up-Ireland Survey of infants and 9-year olds. The Institute also carries out other types of research analyses relating to education and labour market outcomes.

This Department will continue to work with the ERC and the ESRI in making these results and associated analyses better known among teachers, policy-makers and the wider public.

Goal V (International Data Reporting)

To ensure that data on education in Ireland are provided to the Statistical Office of the European Union as well as other international organisations.

Specific Action V.1: Provision of data to international bodies

This Department will continue to provide up-to-date and high-quality data, to various international organisations – Eurostat, UNESCO and OECD, covering areas such as expenditure, enrolment, staffing, classroom instruction, curriculum and levels of educational achievement and completion.

Specific Action V.2: Participation in international comparative surveys

We will participate in a number of key international surveys including¹⁵:

- *Programme for International Student Assessment (2009)*
- *International Civic and Citizenship Study (2009)*
- *Teaching and Learning International Survey (2008)*
- *Development phase of Programme for International Assessment of Adult Competencies (2008)¹⁶*

¹⁵ The OECD launched the Programme for International Student Assessment (PISA) in the late 1990s. So far, three cycles have been undertaken with a primary focus on Reading, Mathematics and Science respectively in 2000, 2003 and 2006. At national level, in addition to work on PISA, the Educational Research Centre at St Patrick's College, Dublin has conducted assessment at the Primary level in reading, mathematics and Gaeilge.

¹⁶ It has been decided to participate in the initial development phase of work in 2008 while keeping the question of long-term commitment to the main PIAAC study due in 2011 open depending on the results of a feasibility study in 2008.

Capacity and Resources

Section 6

6.1 Internal DES resources

The achievement of the objectives outlined in Section 5, above, will require a re-focussing of effort and resources and, at some levels, additional staffing resources. In the context of staff changes arising from de-centralisation it is difficult to project the exact scale and timing of new resources required. However, a note of caution needs to be struck – especially where major projects and innovations such as the Learner Database (Primary) are concerned. Given the uncertainty around staffing levels and change in critical areas such as IT as well as the various Business Units directly involved in administering data on a day-to-day basis priorities will need to be set and the timing of some objectives specified in Section 5 of this document will need to be re-assessed at the end of 2008. However, an overarching priority and goal remains the full development of a Learner Database (Primary) as soon as feasible.

As a first step in implementation of the Department's data strategy, a Data Strategy Implementation Group will be established by January 2008 with representation from a number of key areas within the Department. This Group will oversee the implementation of the Plan and report regularly to the Department's Management Advisory Group. It will take stock of:

- Existing data holdings, arrangements and protocols for access, sharing and processing;
- Staff skills in using and accessing data as well as developing, testing and implementing new database systems;
- IT resources in relation to delivery of key objectives; and
- Quantify Business Unit staffing requirements to make delivery of all Specific Actions identified in Section 5 of this document possible.

6.2 Survey capacity external to DES

There has been a gradual growth in the number of international and national, surveys undertaken by agencies such as the Educational Research Centre and the Economic and Social Research Institute. Added to this, a number of new agencies have come into existence with their own specific data needs and data holdings – such as data on school attendance, public examinations or special educational needs. Furthermore, other agencies such as the Higher Education Authority have broadened their remit to include collection of data from all higher education institutions. We will continue to maintain oversight in relation to the capacity of these bodies to deliver timely and high-quality educational statistics.

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Statistical Potential of Administrative Records

Appendix 1

APPENDIX 1: Statistical Potential of Administrative Records

Section 2.4: An Examination of Data Holdings in Six Government Departments (CSO September 2003)
Main conclusions and recommendations (Department of Education and Science)

1. The introduction of a Primary Pupil Database is crucial and urgent. The capturing of the PPS Number is essential for coherence with other sources and to enable effective targeting of educational disadvantage. With this in mind, we give an outline (in Section 2.5) of a possible method that could be used to introduce a basic but functional database relatively quickly.
2. The systematic use of the PPS Number at all stages of education is essential for the administrative and statistical needs of the Department. The PPS Number should be captured at primary level and fed through the system to second level, examinations databases and third level. Schemes for other state-aided education and training (part-time education, further education, apprenticeships, etc.) should also capture the PPS Number and those sources should be available to the Department, whether or not the Department is involved in their funding. The legal situation of data collection from private schools should also be addressed so that the Department has access to information relating to all children and students.
3. The Department should liaise closely with DSFA [Department of Social and Family Affairs] to ascertain precisely the information that is available now from its CRS and ISTS systems and its potential usefulness for administering and monitoring the outcomes of the education system.
4. The available individual level databases should be exploited to provide the sampling frame for efficient sample selection for testing purposes. This includes testing for the purpose of longitudinal research.
5. The Department should consider the case for direct data collection from students and households at various stages of the educational cycle. We believe there is a strong case for the collection of demographic and socio-economic information at entry to primary education. There is also a very strong case for collection of this information at Junior Certificate examination stage. If this were done, the National Survey of Access to Higher Education would be redundant.
6. The role that destination of exit surveys play in the statistical infrastructure of the Department should be re-appraised.
7. The Department should be the ultimate owner of the micro data for all surveys that it funds.
8. Information on the data sources, and associated metadata, owned by the Department should be clearly publicised both internally and externally.

9. The development of coding frames for disability and special or social needs as well as ethnicity should be pursued with CSO, DSFA and the Equality Authority.
10. The Department should begin an iterative process to identify more precisely its information needs and the sources it intends to develop to meet those needs. This should be an iterative process as needs are sometimes expressed in the context of available sources and therefore Department needs will develop as better data become available.

Best Practice Guidelines for the Development and Implementation of formal Data/Statistics Strategies in Government Departments

Appendix 2

APPENDIX 2: Best Practice Guidelines for the Development and Implementation of formal Data/Statistics Strategies in Government Departments

(National Statistics Board, March 2004)

Guideline 1 Each department should establish a Data Strategy Committee comprising data users (including appropriate outside experts and data users) and data producers to design and deliver its data strategy.

Guideline 2 Each department should include its data/statistics strategy in its periodic Statement of Strategy and comment on progress in its annual report.

Guideline 3 Departments Data Strategy Committees should identify the key policy areas where their department requires statistical information for making and monitoring policy. The Management Advisory Committee within each department should be represented in this process to ensure that the identification of data needs is both comprehensive and strategic.

Guideline 4 Departments should identify their important data needs within each key policy area. These needs should include the key statistical indicators by which a Department will evaluate the effectiveness of its policies. The needs of key users of the department's statistical information should be identified.

Guideline 5 Departments should identify the data holdings available internally (including agencies and other bodies acting on behalf of the Department) that could contribute to meeting the department's policy data needs.

Guideline 6 Departments should identify the external data holdings that could contribute to meeting the Department's unmet policy data needs.

Guideline 7 Departments should prioritise their policy data needs that have not been met through either existing internal or external data holdings. The statistics network proposed by the NSB should examine how official data holdings could be developed to meet these needs.

Guideline 8 Departments should ensure that related data sources are capable of being integrated at the individual record level. The increased use of the Personal Public Service Number within data holdings in government departments is of central importance in this context.

Guideline 9 The CSO should assist individual departments to further develop the statistical competence of their staff.

Guideline 10 The CSO should work with departments to develop a core set of demographic and socio-economic variables. These could either be independently collected in administrative schemes and surveys or preferably, subject to meeting data protection restrictions, collected via a central repository such as the Department of Social and Family Affairs Central Records System database.

Guideline 11 The CSO and departments should ensure that the wording of the questions used to collect the core information is expressed in a consistent manner across all schemes and surveys.

Guideline 12 Departments should consult with the CSO to ensure that common classifications and coding systems are used as much as possible throughout their data holdings. The increased use of consistent small area geo-coding and grid co-ordinates point coding is required to facilitate comprehensive spatial analyses.

Guide to Relevant Legislation

Appendix 3

APPENDIX 3: Guide to Relevant Legislation

Statistics Act (1993)	
Education Act (1998)	<p>Following Section 6(1) which aims 'to enhance the accountability of the education system', Section 7(2)b allows the Minister for Education to:</p> <p>'monitor and assess the quality, economy, efficiency and effectiveness of the education system provided in the State by recognised schools and centres for education, having regard to the objects provided for in section 6 and to publish, in such manner as the Minister considers appropriate, information relating to such monitoring and assessment'</p>
Education Welfare Act (2000)	<p>Section 19 allows the Minister to prescribe the information which a parent must provide to a school when making an application for enrolment. It also requires the school to make a decision on the application not later than 21 days after the parent has provided the information prescribed by the Minister.</p> <p>Section 20 requires a Principal to notify in writing the Principal of the "sending" school when a child transfers between schools. This notification carries statutory obligations with regard to the School Registers and transfer of information relating to the child's educational progress.</p> <p>Section 28 provides for data sharing among 'prescribed bodies' for 'a relevant purpose only' defined to include any of the following:</p> <p><i>'recording a person's educational or training history or monitoring his or her educational or training progress in order to ascertain how best he or she may be assisted in availing of educational or training opportunities or in developing his or her full educational potential'</i></p> <p>or <i>'carrying out research into':</i></p> <p><i>'the extent to which persons in receipt of, or who have received, a certain minimum education present for examinations to which Part VIII of the Act of 1998 applies, and the performance in such examinations of persons who so present', or</i></p> <p><i>'the extent to which persons who have received a certain minimum education participate further in programmes of education, training or instruction'</i></p> <p>or</p>

Education Welfare Act (2000)	<p><i>'the general effectiveness of educational or training programmes'.</i></p> <p>Furthermore, Statutory Instrument No. 639 of 2005 provides for data sharing between the National Council for Special Education, this Department, the National Educational Welfare Board and various other parties.</p>
Equality Act (2004)	<p>Sections 12 and 13 of the 2004 Act amend parts of the 1998 Education Act to allow admissibility of statistics in assessing cases of claimed discrimination.</p>
Education of Persons with Special Educational Needs (2004) and Disability Act	<p>This legislation requires the preparation of Reports and other sources of information required for assessment, monitoring, planning and service delivery. Among the duties of the National Council for Special Education are:</p> <p><i>'to disseminate to schools, parents and such other persons as the Council considers appropriate information relating to best practice, nationally and internationally, concerning the education of children with special educational needs'</i></p> <p><i>'to ensure that the progress of students with special educational needs is monitored and that it is reviewed at regular intervals'</i></p> <p><i>'to assess and review the resources required in relation to educational provision for children with special educational needs'</i></p>
<p>Social Welfare (Consolidation) Act 1993</p> <p>Social Welfare Act 1998, 1999, 2000, 2002 and 2003</p>	<p>The legislation permits data sharing for the administration and control of certain Health Board schemes (including Medical Cards), Higher Education Grants, Civil Legal Aid and Local Authority Housing subventions.</p> <p>Section 14(2)</p> <p><i>'A specified body holding information may share that information with another specified body who has a transaction with a natural person relating to a relevant purpose, where the specified body seeking the information provides the personal public service number of the person who is the subject of the transaction and satisfies the data</i></p>

<p>Social Welfare (Consolidation) Act 1993</p> <p>Social Welfare Act 1998, 1999, 2000, 2002 and 2003</p>	<p><i>controller of the specified body holding the information that the information requested is relevant to the transaction for the said purpose between the person and the specified body seeking such information'</i></p> <p>Section 223D.</p> <p><i>'Notwithstanding anything contained in any other enactment, a specified body may share such information, as may be prescribed, with the Minister for Education and Science where that Minister requires the information for the purpose of enabling him or her to provide education in accordance with section 6(b) of the Education Act, 1998'</i></p> <p><i>'223E.—(1) Notwithstanding anything contained in any other enactment, a specified body number. may share such information, as may be prescribed, with the Minister for the purpose of seeking from the Minister the personal public service number for each person in respect of whom the information is shared.</i></p> <p><i>(2) Information received by the Minister under subsection (1) may be used by the Minister for the purpose of identifying the personal public service number for each person in respect of whom such information is received and for updating the Minister's own records in respect of that person.</i></p> <p><i>(3) Where a specified body has sought a personal public service number under subsection (1) in respect of a person, the Minister may share such information, as may be prescribed, in respect of that person with that specified body for the purpose of giving that specified body the personal public service number relating to the person.</i></p>
<p>Freedom of information Act (1997)</p>	
<p>Data Protection Act 1988 & Data Protection (Amendment) Act 2003</p>	<p><i>2B.—(1) Sensitive personal data shall not be processed by a data controller unless:</i></p> <p><i>....(ix) the processing is necessary in order to obtain information for use, subject to and in accordance with the Statistics Act 1993, only for statistical, compilation and analysis purposes,</i></p>

APPENDIX 4: Possible Standardised Entrant Fields

(for DES Learner Database only and not for the totality of information collected and held at school level).

Ed_Reg 1 Enrolment at point of entry to **Primary School** for the first time. Basic information as follows:

Name
Home Address
PPSN
Sex
Date of Birth
Name of parents/guardians
PPSN of parents/guardians

Ed_Reg 2 electronic form provided to DES by Primary School at end of first term:

Updates to any information in Reg 1 plus:

Nationality
Ethnicity/Traveller status
Medical Card eligibility
Language needs
Special education needs

Each time a pupil changes **Primary school** within the State, Form **Ed_Reg 2** is presented by the pupil's family to the new school and information is accordingly updated on the Central database in DES.

Ed_Sec 1 Form will be prepared by the Primary School in Sixth class in respect of each pupil.

This will include the following:

Name
Home Address
PPSN
Sex
Date of Birth
Name of parents/guardians
PPSN of parents/guardians
Nationality
Ethnicity/Traveller status
Medical Card eligibility
Language needs
Special education needs

The Form may not be accessed by a Second Level school until the child has been admitted to Second Level School. Then **Ed_Sec 1** will be transferred to the Second Level School.



European Statistics Code of Practice

Appendix 5

APPENDIX 5: European Statistics Code of Practice

(adopted by the Statistical Programme Committee on 24 February 2005).

Principle 1: Professional Independence.

The professional independence of statistical authorities from other policy, regulatory or administrative departments and bodies as well as from private sector operators ensures the credibility of European Statistics. Indicators include: Independence of the statistical authority from political and external sources is specified in law. The head of the statistical authority being of the highest calibre and having access at senior level to policy authorities and administrative public bodies.

Principle 2: Mandate for Data collection.

Statistical authorities must have a clear legal mandate to collect information for European statistical purposes. Administrations, enterprises and households and the public at large may be compelled by law to allow access to or deliver data for European statistical purposes at the request of statistical authorities. Indicators include: The mandate is specified in law. The statistical authority is allowed by national legislation to use administrative records for statistical purposes. On the basis of a legal act, the statistical authority may compel response to statistical surveys.

Principle 3: Adequacy of Resources.

The resources available to statistical authorities may be sufficient to meet European statistics requirements. Indicators include: availability of resources –staff, financial and computing- to meet standards. The scope detail and cost is equal to needs. Procedures exist to assess and justify demands for new statistics against their cost and to assess the continuing need.

Principle 4: Quality Commitment.

All ESS members commit themselves to work and co-operate according to the principles fixed in the Quality Declaration of the European Statistical System. Indicators include: Product Quality is regularly monitored. Processes are in place to monitor the quality of the collection, processing and dissemination of statistics, to deal with quality considerations and guide planning for existing and emerging surveys.

Principle 5: Statistical Confidentiality.

The privacy of data providers, the confidentiality of the information they provide and its use only for statistical purposes must be absolutely guaranteed. Indicators include: Confidentiality is guaranteed in law. Staff sign legal confidentiality agreements. Penalties are prescribed for breach of confidentiality.

Principle 6: Impartiality and Objectivity.

Statistical authorities must produce and disseminate European Statistics respecting scientific independence and in an objective, professional and transparent manner in which all users are treated equitably. Indicators include: statistics are compiled on an objective basis, choices of sources and statistical techniques are determined by statistical considerations. Errors discovered are corrected as soon as possible and publicised.

Principle 7: Sound Methodology.

Sound Methodology must underpin quality statistics. Indicators include: Overall methodological framework follows European and international guidelines. Procedures are in place to ensure that standard concepts, definitions and classifications are consistently applied. The business register and the frame for population surveys are regularly evaluated and adjusted if necessary.

Principle 8: Appropriate Statistical Procedures.

Appropriate statistical procedures, implemented from data collection to data validation, must underpin quality statistics. Indicators include: The definition and concepts used for administrative purposes must be a good approximation to those required for statistical purposes. Questionnaires are tested prior to the data collection. Survey designs, sample selections and sample weights are well based and regularly reviews revised or updated as required.

Principle 9: Non excessive burden on respondents.

The reporting burden should be proportionate to the needs of the users and should not be excessive for respondents. The statistical authority monitors the response burden and sets targets for its reduction time. Indicators include: The range and detail of European statistics demands is limited to what is absolutely necessary. The reporting burden is spread as widely as possible over survey populations through appropriate sampling techniques. The information sought from businesses is as far as possible, readily available from their accounts and electronic means are used where possible to facilitate returns.

Principle 10: Cost Effectiveness.

Resources must be effectively used. Indicators include: internal and independent external measures monitoring the statistical authorities use of resources. Routine clerical operations are automated where possible.

Principle 11: Relevance.

European Statistics must meet the needs of users. Indicators include: Processes are in place to consult users, monitor the relevance and practical utility of existing statistics in meeting their needs and advise on their emerging needs and priorities.

Principle 12: Accuracy and Reliability.

European Statistics must accurately and reliably portray reality. Indicators include: Source data, intermediate results and statistical outputs are assessed and validated. Sampling and non sampling errors are measured and systematically documented.

Principle 13: Timeliness and Punctuality.

European Statistics must be disseminated in a timely and punctual manner. Indicators include: timeliness meets the highest European and international dissemination standards. A standard daily time is set for the release of European statistics.

Principle 14: Coherence and Comparability.

European Statistics should be consistent internally, over time and comparable between regions and countries; it should be possible to combine and make joint use of related data from different sources. Indicators include: Statistics are internally coherent and consistent and reconcilable over a period of time. Statistics are compiled on the basis of common standards with respect to scope, definitions, units and classifications.

Principle 15: Accessibility and Clarity.

European Statistics should be presented in a clear and understandable form, disseminated in a suitable and convenient manner, available and accessible on an impartial basis with supporting metadata and guidance. Indicators include: Statistics are presented in a form that facilitates proper interpretation and meaningful comparison. Dissemination services use modern information and communication technology and if appropriate traditional hard copy.

