Update

Ministry

Education

Describe: Basic Job Details

Position

Position ID

Position Name (30 characters)

Systems Analyst

Current Class

Job Focus

Supervisory Level

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Organizational Structure

Division, Branch/Unit

☐ Current organizational chart attached?

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

Design: Identify Job Duties and Value

Changes Since Last Reviewed

Date yyyy-mm-dd

Responsibilities Added:

Responsibilities Removed:

Job Purpose and Organizational Context

Why the job exists:

Provincial Assessment sector delivers and administers early years literacy and numeracy assessments, provincial achievement tests (PATs), diploma exams, and Canadian Adult Education Credential (CAEC) assessments. As part of the analytics unit, the Systems Analyst reports to the Senior Manager, Scoring and Reporting. The analytics unit is responsible for providing psychometric advice regarding the design,

development, and enhancement of testing, marking, scoring, and results reporting for all provincial assessments (PATs, diploma exams, and literacy/numeracy assessments), as well as the new CAEC assessments multiple times each school year. There are numerous deadlines associated with the scoring and reporting of provincial assessments. It is crucial that student results are reported accurately, and the data is also used as part of the Assurance Framework. In addition to providing psychometric oversight and IT support for current provincial assessments and the new CAEC assessments, the unit's advice is also required for the new digital online assessment solutions.

The Systems Analyst provides technical leadership in the delivery of information technology applications development and maintenance services within the sector and Alberta Education. The position serves as a technical and analytic resource in addition to providing a comprehensive range of information technology applications support activities.

Responsibilities

Job outcomes (4-6 core results), and for each outcome, 4-6 corresponding activities:

Major responsibilities include:

· providing technology consulting support for clients at all levels of the sector and Ministry;

· providing a range of activities relating to information technology development projects; and

· carrying out a full range of information technology applications system and client support services (i.e., hardware and software planning; systems design, development, testing, implementation, and documentation; system maintenance; client training; management information reporting; and end-user computing.)

1. Working within a team environment, provides for the ongoing maintenance and enhancement of existing and new information technology systems within the sector as specified by service plans and schedules.

Ensures Ministry and Government of Alberta standards and guidelines surrounding application maintenance and Ministry policies and procedures relating to security and operation of client systems and databases are recognized and complied with while performing the following activities:

· Develops and maintains plans for the maintenance and enhancement of a variety of information technology applications of differing technology and complexity.

· Develops, tests, and implements changes to applications in an efficient, effective, and well-controlled manner.

· Responds to Ministry program or priority changes by adjusting plans, assignments, and schedules as required.

· Participates in analysis of client needs and preparation of functional requirements and application specifications.

· Participates in review and evaluation of information technology applications, and in the preparation of recommendations to management of client areas.

· Provides support to clients as required for timely, reliable operations of all information technology applications.

2. Contributes to development, design, construction, testing and implementation of wide range of information technology applications that support client requirements and Ministry objectives.

Ensures Ministry and Government of Alberta standards and guidelines surrounding application development and Ministry policies and procedures relating to security and operation of client systems and databases are recognized and complied with while performing the following activities:

· Carries out development and implementation activities associated with designated components of information technology projects.

· Assists with preparation of project work plans and resource estimates (i.e., manpower, system processing, contract analysts, hardware and software, etc.).

· Investigates requirements and provides recommendations relating to technical resources required to meet client application needs (i.e., hardware, software, and network).

· Ensures appropriate Ministry and technical standards, practices, methods, and procedures are adhered to.

· Communicates and coordinates activities with clients, project team staff, technical support staff, other project teams working on related information technology projects, and applications maintenance staff to support required planning, design, and integration of new systems and databases.

· Monitors availability, quality, cost effectiveness, and maintainability of information technology applications being developed and assists clients to ensure quality, accuracy, and timeliness of associated data.

· Guides and assists with analysis of client requirements, preparation of system specifications, and construction, testing, training, implementation, documentation, and end-user support activities as appropriate.

· Participates in post-implementation reviews and preparation of associated reports and recommendations.

3. Provides support services to sector and Ministry managers and staff as required to address a wide variety of data analysis and information and reporting needs.

· Maintains in-depth understanding of data held in Ministry files to effectively deal with information requirements of clients.

· Provides ad hoc reporting services to address information requests from management.

· Consults with clients to clarify analysis or ad hoc reporting requirements.

· Prepares service level and activity reports.

4. Provides leadership to clients relating to their ability to be more productive through use of information technology and more self-sufficient in directly accessing and manipulating data to meet their information requirements.

· Assists with evaluation of new products to address client requirements and provides input to development of Ministry information technology standards, procedures, and guidelines.

· Develops training programs for clients.

· Assists clients to develop and/or enhance their skills to levels required to achieve their objectives.

Problem Solving

Typical problems solved:

Reporting to the Senior Manager, Scoring and Reporting, the Systems Analyst is expected to exhibit leadership in the application of creativity and originality to all responsibilities. Specific examples include identifying opportunities to effectively apply existing and new technologies, determining optimum designs for new applications, and determining best methods for extracting and manipulating data to address specific management information requirements.

This position completes work within the parameters of established policies and processes of the Ministry

and business units. Work is reviewed in terms of achievement of outcomes, with the Systems Analyst meeting regularly with the Senior Manager, Scoring and Reporting or management to discuss client satisfaction with system enhancements, major change requests, schedules, and data quality. This position functions with considerable independence, making decisions relating to development and maintenance of information technology applications.

The Systems Analyst is expected to make recommendations as to appropriate application hardware, software, and network requirements based on thorough understanding of client requirements and sector, Ministry and government standards. Matters outside the scope of the analytics unit or involving significant impact on other functions are referred to the Senior Manager, Scoring and Reporting, as are policy infringements or changes to policy and standards for applications maintenance and development.

Types of guidance available for problem solving:

The Systems Analyst works within a broad framework of policies and under the supervision and guidance of the Senior Manager, Scoring and Reporting. This position collaborates with sector and unit staff, including psychometricians, analysts, assessment specialists, and diploma exam leads. The guide references include:

· Standards for Educational and Psychological Testing (2014);

· Principles for Fair Student Assessment Practices for Education in Canada (1993); and

· Freedom of Information and Protection of Privacy Act (FOIP).

Direct or indirect impacts of decisions:

In addition to providing information technology application development and maintenance support to designated business units of Alberta Education, this position is involved with applications and projects having sector-wide scope.

The Systems Analyst is required to take a broad view of information technology applications in terms of recognizing the impact of changes to applications and new applications on upstream and downstream processes within the sector.

This position is responsible and accountable for data integrity and accuracy of assessment results and queries to provide managers and executive level leadership with reliable and evidence-based advice, information, and recommendations to support informed decisions regarding business information for assessment applications and to maintain confidence in sector and Ministry products.

Key Relationships

Major stakeholders and purpose of interactions:

The Systems Analyst interacts regularly with staff at various levels of the sector and organization, with an emphasis on providing consultative advice and support to management within the business units regarding scoring and reporting of provincial assessments. This includes contact with assessment specialists/diploma exam leads, psychometricians, and analysts on an ongoing basis.

The position is required to interact and consult with internal and external partners, the department's management structure, and other stakeholders as required for discussion, information exchange, analyses, and information requests associated with provincial assessment programs. Also provides expertise, advice, data/information, analyses, study findings, reports, and graphs as required. This includes contact with System Assurance Branch, Student Records Branch, the Provincial Approach to Student Information (PASI) team, schools, and school authorities.

The Systems Analyst may represent the analytics unit and/or Provincial Assessment sector on Ministry and

government information technology applications projects, providing input and ensuring the requirements of the Ministry are communicated and understood.

This position is delegated the responsibility to work jointly with analytics unit and Provincial Assessment sector staff to complete responsibilities. The Systems Analyst is expected to coordinate the activities of and provide direction to internal staff and external resources when leading designated components of large information technology projects.

Required Education, Experience and Technical Competencies

Education Level

Bachelor's Degree (4 year)

Focus/Major

Other

2nd Major/Minor if applicable

Designation

If other, specify:

Computer Science

Job-specific experience, technical competencies, certification and/or training:

Degree related to Computer Science and at least two years directly related experience, or

Equivalency: Two-year diploma related to computer technology and four years directly related experience or other equivalent combinations of relevant coursework and experience (i.e., one-year certificate from recognized post-secondary institution and five years related experience).

Training or experience in project leadership highly desirable. Experience in development and maintenance of information technology applications is required, as is experience providing consultation and technical support to clients. Technical knowledge of broad range of information technology infrastructure and applications required for performance of specific job responsibilities is also necessary.

The possession and maintenance of ISP and/or associated vendor certification is an asset.

The Systems Analyst requires an in-depth knowledge of:

· information technology infrastructure and applications (e.g., development and reporting tools such as SQL, VB.NET, ASP.NET, Active Reports, Visual Studio)

· maintenance and development techniques standards for information technology applications used in the Ministry

· specific software development tools

· relational databases

Along with knowledge of:

· modular programming techniques, systems analysis techniques, web development techniques and tools, and networking and telecommunication technology

· Ministry and Government of Alberta policies and standards relating to information technology applications and security

· relevant legislation and manuals relating to the processing of learner-related data (e.g., Guide to Education, *Freedom of Information and Protection of Privacy* (FOIP) *Act*, *Education Act*, Funding Manual for School Authorities)

The Systems Analyst must have:

· strong analytical and problem solving skills

· effective written and verbal communication skills

· project coordination skills

· consultation and interpersonal skills

The Systems Analyst must be able to:

· lead and coordinate medium sized information technology projects or components of major projects

· provide consultation and advice relating to information technology applications to management and non-technical staff

· conduct investigative studies of information technology systems

· lead definition and/or development of system specifications for medium sized information technology systems or components of large systems

· maintain state-of-the-art awareness of industry direction and current and emerging information technology applications

· identify and promote new information technology applications of high potential value to the Ministry

· develop and maintain in-depth understanding of hardware and software packages used in the Ministry

· work independently as well as contribute within a team environment

· demonstrate initiative and creativity relating to assigned responsibilities

Behavioral Competencies

Pick 4-5 representative behavioral competencies and their level.

Competency	Level A B C D E	Level Definition	Examples of how this level best represents the job
Systems Thinking	○ ○ ◉ ○ ○	Takes a long-term view towards organization's objectives and how to achieve them: • Takes holistic long-term view of challenges and opportunities • Anticipates outcomes and potential impacts, seeks stakeholder perspectives • Works towards actions and plans aligned with APS values • Works with others to identify areas for collaboration	This position understands the expectation to provide accurate data/ information and results for internal and external stakeholders. This position understands the impact of ensuring fair, valid, and reliable scoring/reporting to meet the organization's objectives and stakeholder needs in a changing environment.

Drive for Results	○ ◉ ○ ○ ○	Works to exceed goals and partner with others to achieve objectives: • Plans based on past experience • Holds self and others responsible for results • Partners with groups to achieve outcomes • Aims to exceed expectations	This position sets and works to exceed goals by partnering with others to ensure that accurate assessment results are reported in a timely manner according to established schedules.
Creative Problem Solving	○ ○ ◉ ○ ○	Engages the community and resources at hand to address issues: • Engages perspective to seek root causes • Finds ways to improve complex systems • Employs resources from other areas to solve problems • Engages others and encourages debate and idea generation to solve problems while addressing risks	This position contributes to the improvement of complex information technology applications and systems by engaging different perspectives and addressing potential risks.
Agility	○ ◉ ○ ○ ○	Works in a changing environment and takes initiative to change: • Takes opportunities to improve work processes • Anticipates and adjusts behaviour to change • Remains optimistic, calm and composed in stressful situations • Seeks advice and support to change appropriately • Works creatively within guidelines	This position anticipates and takes initiative to adjust and improve work processes and to plan/ deliver training related to scoring/reporting applications and systems to meet goals in an ever changing environment.