COURSELINK TOOL SPOTLIGHT: INTELLIGENT AGENTS

Carolyn Creighton, Ph.D.,
Instructional Technology Specialist

Owen Wooding BA.,
Instructional Technology Specialist
AGENDA

• What is the Intelligent Agents tool?
• Potential course-level uses for Intelligent Agents
• Accessing Intelligent Agents (& adjusting settings)
• Creating & testing your agents (with demos!)
• Tips on how to get the most from your agents
• Finding support for Intelligent Agents
• Question & answer period
WHAT IS THE INTELLIGENT AGENTS TOOL?
**WHAT DOES “INTELLIGENT AGENT” MEAN?**

An intelligent agent is a software that assists people and acts on their behalf.

Intelligent agents work by allowing people to delegate work that they could have done, to the agent software.

- Hanh Tran & Thaovy Tran
WHAT DOES THE INTELLIGENT AGENTS TOOL DO?

The Intelligent Agents (IA) tool in CourseLink assists instructors and acts on their behalf by allowing them to delegate work that they could have done, but may have been difficult due to class size, access to data, etc.

The Intelligent Agents tool automates the process of sending emails composed by course instructors to course participants when they meet (or do not meet) certain criteria.
**How Intelligent Agents Work**

- Creates an agent
- Schedules it
- Defines criteria
- Writes email

- Runs agent
- Locates users who meet the criteria
- Sends email

- Receives replies from students
- Follows up as required
A SIMPLE PRACTICAL EXAMPLE

Your course has been under way for a week, and you want to give a nudge to any students who have not yet accessed your course site.

Let’s compare how you would do this manually vs. how you would do this using Intelligent Agents.
OPTION 1: DO IT MANUALLY...

- Access your Classlist tool
- Look for all the students that have no value under the last accessed column
- Write down or copy and paste all their email addresses
- Compose a message
  - Make it impersonal and send it all your students using the BCC field
  - Send individual personalized emails to each student
- Hope that no students access the course site between the time you checked the Classlist and the time you sent your email(s)
**OPTION 2: USE INTELLIGENT AGENTS**

- Create an intelligent agent
- Schedule it to run at a specific date/time
- Set it to send to those with the registered student role
- Set the condition to “has not accessed the course in the last [10] days”
- Compose your message (use replacement strings to personalize it – Hello [Owen], Hello [Carolyn], etc.)
- Save the agent

**BONUS**: Copy your agent to the next offering of the course, update the send date for that semester, and enable the agent.
EXAMPLES OF INTELLIGENT AGENT USES

This is not an exhaustive list. There are many ways to leverage intelligent agents.
Intelligent Agent Uses

Intelligent Agents leverage CourseLink’s Release Conditions option to identify who should receive a message.

As a result, there are countless ways agents can be leveraged depending on what other CourseLink tools you use in your course.

We will explore examples from the following tools today:

- Dropbox
- Discussions
- Quizzes
- Content
INTELLIGENT AGENT USES – DROPBOX

There are 4 release conditions that are applicable to the Dropbox tool within Intelligent Agents:

- Submission to dropbox
- Receive feedback on dropbox submission
- Score on associated rubric
- No submission to dropbox

Let’s look at two of these options.
INTELLIGENT AGENT USES – DROPBOX

Receive feedback on dropbox submission
This condition can be used to help encourage students to review the feedback they have been provided.
• When feedback is published, students with feedback receive an email message from the instructor
• You may craft the message to:
  – Remind them why reviewing feedback is important
  – Explain how it is accessed on CourseLink
  – Provide them the option to contact you (or a TA) if they have any questions about their feedback

TIP: We recommend this be set as a manually triggered agent
Bonus: Copy the agent and reuse it for other Dropbox folders!
INTELLIGENT AGENT USES – DROPBOX

No submission to dropbox

This condition can be used to reach out to students who have not submitted on/near the due date for an assignment.

• The agent checks to see which students have not yet submitted to a specific Dropbox folder
• Identified students receive an email from the instructor
• You may craft the email to:
  – Remind them of the due date
  – Inform them of any official late period/penalties
  – Ask that they contact you if they are experiencing any issues preventing them from submitting on time

**TIP:** We recommend this be set as a scheduled agent

**Bonus:** Copy the agent and reuse it for other Dropbox folders!
INTELLIGENT AGENT USES – DISCUSSIONS

There are 3 release conditions that are applicable to the Discussions tool within Intelligent Agents:
• Posts authored in topic
• Score on associated rubric
• No posts authored in topic

Let’s look at two of these options.
INTELLIGENT AGENT USES – DISCUSSIONS

Posts authored in topic
This condition lets you set a threshold of how many discussion posts must be made to trigger an email to a student.

This condition offers a few potential uses:
• Encourage students to post more if they have only posted once to drive engagement and participation
• Let students know when they have met a pre-determined post requirement
• Reach out to students who are driving conversation to thank them or possibly to ask them to allow others to speak

TIP: This condition lets you choose between new threads or new threads and replies in the post count.
Bonus: Copy the agent & reuse it for other discussion topics!
INTELLIGENT AGENT USES – DISCUSSIONS

No posts authored in topic
This condition lets you send an email message to any students who have not posted to a specific discussion topic.

This condition offers a few of potential uses:
- Encourage students to post who might be less inclined to do so than others
- Remind students to post if they are being assessed or if there is expected number of posts requirement
- Provide instructions on how to post and examples of what they may want to include when authoring a thread
INTELLIGENT AGENT USES – QUIZZES

There are **5 release conditions** (3 applicable) that are associated with the **Quizzes tool** within Intelligent Agents:

- Score on a quiz
- Completed quiz attempt
- No completed quiz attempt
- Score on selected questions (N/A - requires objectives)
- Score on associated rubric (N/A - rubrics not typically used in Quizzes)

Let’s look at **one** of these options.
INTELLIGENT AGENT USES – QUIZZES

Score on a quiz
This condition lets you send an email message to any students who achieve a score within a certain range on a quiz. Includes greater than, less than, equal to, and between options when setting values.

This condition offers the ability to:
• Congratulate/encourage students that performed well
• Aid students who did poorly/provide links to resources
• Give students an opportunity to connect with you for assistance via a reply

TIP: If using multiple messages for the same quiz, be sure to label and describe the agents well to tell them apart & test!

Bonus: Combine multiple conditions like scoring low on one quiz and high on the next one to acknowledge improvement.
INTELLIGENT AGENT USES – CONTENT

There are 5 release conditions that are applicable to the Content tool within Intelligent Agents:

• Visited content topic
• Visited all content topics
• Not visited content topic
• Completed content topic
• Not completed content topic

Let’s look at one of these options.

Note 1: CourseLink sets content that is visited as complete by default (no difference unless that setting is changed).

Note 2: Be careful using content visits as triggers. Some students may download & view offline, or may have viewed on a friend’s computer/account if they live together, etc.
INTELLIGENT AGENT USES – CONTENT

Not visited content topic
This condition lets you send an email message to any students who have not accessed a content topic by clicking the link from their account.

This condition offers the ability to:
• Reach out to students who may not have accessed some important course materials through the Content tool
  – E.g., Course Outline, assignment information, study resources for a midterm or exam
• Provide reminders on how you are using the Content tool for your course (not all instructors use it the same way)

TIP: Try staring agent messages with content access conditions with a line like: “According to CourseLink’s logs, it appears your account has not accessed [X]. If you have accessed this material another way, please disregard this message.”
INTELLIGENT AGENT USES – OTHER TOOLS

In addition to the tools covered, Intelligent Agent release conditions can also be used with the following tools:

- Awards
- Checklist
- Classlist
- Grades
- Surveys
INTELLIGENT AGENT USES – SUMMARY

The examples provided today are just some of the ways the IA tool can help instructors perform tasks that may have seemed otherwise daunting to undertake.

• Keep in mind that multiple release conditions for same tool or different tools can be combined into a single agent allowing even more specific messaging.

• Consider ways you might be able to leverage the Intelligent Agents tool to help you engage with your students and improve the experience in your course.
ACCESSING INTELLIGENT AGENTS

(& adjusting settings)
ACCESSING INTELLIGENT AGENTS

Intelligent Agents are accessed through the Course Admin link on your course site’s navigation bar.
ACCESSING INTELLIGENT AGENTS

From the Course Admin page, Intelligent Agents is listed under the Communication heading.
ACCESSING INTELLIGENT AGENTS

Before you begin creating agents, you will first want to adjust the default settings by clicking the **Settings** link.

Agent List

- New Agent
- Edit Categories
- More Actions

View: All agents

Apply
ACCESSING INTELLIGENT AGENTS

Switch the option from “Use system defaults” to “Set custom values for this course” and enter a “from” name and the “reply-to” email address for your communications.

Note 1: Failing to change these settings means your messages come from courselink@uoguelph.ca (and they receive replies)

Note 2: If you are part of a teaching team, these values can be set to a general name and email (e.g., CODE*1000 Team and code1000@uoguelph.ca)
CREATING & TESTING YOUR AGENTS
**CREATING INTELLIGENT AGENTS**

After you have adjusted your settings, you’re all set to start creating agents by clicking the **New Agent** button.
INTELLIGENT AGENTS COMPONENTS

The Intelligent Agent creation process is comprised of 4 components:

1. **Details**
   Set the name, description, category, and status.

2. **Scheduling**
   Determine when and how often the agent should run.

3. **Criteria**
   Who (role) and what (condition) triggers the agent.

4. **Actions**
   How often should the message send and what message should be sent/who should receive it.
CREATING AN AGENT: DETAILS

While the Agent Name field is the only required option, we recommend including a detailed description of what the agent does and when/how it runs.
CREATING AN AGENT: DETAILS

Use categories to help with organization and locating agents, especially when using many different agents in a course.

- Use any categorization system (e.g., by tool – Discussions, Dropbox, etc., by trigger – manual/scheduled, by type – reminder, encouragement, etc.)
CREATING AN AGENT: DETAILS

Agents are **not enabled by default** when they are created, but you may enable them instantaneously by checking the “Agent is enabled” box. Alternatively, you may enable/disable agents from the Agent List.
CREATING AN AGENT: SCHEDULING
**CREATING AN AGENT: SCHEDULING**

Agents can be set to run on a schedule, or as a one-time run. Alternatively, you may choose to have no schedule and run the agent manually.

The following scheduling options are available:

- **One-Time Run** (New option! You set a date and time.)
- Hourly (every X hours)
- Daily (every X days)
- Weekly (every X weeks)
- Monthly (every X months)
- Annually (every X years)

**Note**: For all options you may set a specific time for the agent to run. For options other than one-time run, you may set a date range (e.g., every 2 days from Jun. 1 to July 31)
CREATING AN AGENT: CRITERIA
Creating an Agent: Criteria

Criteria allows you to select what roles (e.g., Registered Student), actions (CourseLink login/accessing your course site), and conditions (Release Conditions) will trigger the agent to send a communication.

Recommendation:
In most cases you will want to select the specific role – Registered Student, to ensure only students receive communications (not TAs).

Tip: When adding multiple release conditions, you may select whether satisfying ANY or ALL (default) conditions is required to trigger the agent to send an email.
CREATING AN AGENT: ACTIONS

Repetition

- Take action only the first time the agent’s criteria are satisfied for a user
- Take action every time the agent is evaluated and the agent’s criteria are satisfied for a user

What Action Repetition setting should I use?

Send an Email

- Send an email when the criteria are satisfied
CREATING AN AGENT: ACTIONS

Actions lets you define how often a communication should be sent. There are two options:

1. Take action **only the first time** the agent’s criteria are satisfied for a user (default)
2. Take action **every time** the agent is evaluated and the agent’s criteria are satisfied for a user

The first option means that a student will never receive the same email twice, even if the agent runs more than once and they meet the conditions to trigger the email.

The second option will send the email every time it is run, and the student qualifies.
CREATING AN AGENT: ACTIONS

Actions is also where the email communication is composed. It allows you to use various replacement strings in the email to send separate emails to specific participants (students).

To send emails directly to the participant who meets the criteria of the agent, populate the “To:” field with the following replacement string: {InitiatingUser}
CREATING AN AGENT: ACTIONS

For the subject and body of the message, additional replacement strings can be leveraged to help personalize the message for the students. These include:

- `{OrgName}` - The name of the organization. [CourseLink]
- `{OrgUnitCode}` - The code for the org unit. [CODE_1000_01_F22]
- `{OrgUnitName}` - The name of the org unit. [CODE*1000 (01) F22 – Course Title]
- `{OrgUnitStartDate}` - The start date specified for the org unit. [Course site opens]
- `{OrgUnitEndDate}` - The end date specified for the org unit. [Course site closes]
- `{InitiatingUserFirstName}` - The first name of the initiating user. [Owen]
- `{InitiatingUserLastName}` - The last name of the initiating user. [Wooding]
- `{InitiatingUserUserName}` - The username of the initiating user. [owooding]
- `{InitiatingUserOrgDefinedId}` - The Org Defined ID of the initiating user. [87654321]
- `{LoginPath}` - The address of the login path for the site. [CourseLink login page]
- `{LastCourseAccessDate}` - The date the initiating user last accessed the course.
- `{LastLoginDate}` - The date the initiating user last logged in. [Accessed CourseLink]
CREATING AN AGENT: ACTIONS

Example Email (Replacement Strings)

To: {InitiatingUser}

Subject: {OrgUnitName} Assignment 1 Due Today!

Body:
Hello {InitiatingUserFirstName},

This is a quick reminder that assignment 1 for {OrgUnitName} must be submitted to the Assignment 1 Dropbox folder by 11:59 PM ET today. At the time this message was sent, there was no submission yet from your account.

If you are experiencing any technical difficulties with your submission, please contact CourseLink support at x.56939 before 8:30 PM ET.

If you are experiencing other issues that are impacting your ability to submit on time, please connect with me before the deadline.

Thanks,
Professor Wooding
Example Email (Student Receives)

To: owooding@uoguelph.ca

Subject: CODE*1000 (01) F22 – Course Title Assignment 1 Due Today!

Body:
Hello Owen,

This is a quick reminder that assignment 1 for CODE*1000 (01) F22 – Course Title must be submitted to the Assignment 1 Dropbox folder by 11:59 PM ET today. At the time this message was sent, there was no submission yet from your account.

If you are experiencing any technical difficulties with you submission, please contact CourseLink support at x.56939 before 8:30 PM ET.

If you are experiencing other issues that are impacting your ability to submit on time, please connect with me before the deadline.

Thanks,
Professor Wooding
CREATING AN AGENT: ACTIONS

Example Email (Student Receives)

To: cacreigh@uoguelph.ca

Subject: CODE*1000 (01) F22 – Course Title Assignment 1 Due Today!

Body:
Hello Carolyn,

This is a quick reminder that assignment 1 for CODE*1000 (01) F22 – Course Title must be submitted to the Assignment 1 Dropbox folder by 11:59 PM ET today. At the time this message was sent, there was no submission yet from your account.

If you are experiencing any technical difficulties with you submission, please contact CourseLink support at x.56939 before 8:30 PM ET.

If you are experiencing other issues that are impacting your ability to submit on time, please connect with me before the deadline.

Thanks,
Professor Wooding
HOW TO GET THE MOST FROM YOUR AGENTS

A few simple tips.
GETTING THE MOST OUT OF YOUR AGENTS

As we have seen, Intelligent Agents is a powerful and helpful tool that can increase engagement with your students without bogging you down with tracking down who should receive various messages.

However, there are 4 simple tips that we recommend you consider when working with the Intelligent Agents tool.
**Tip #1: Don’t Overdo It!**

As with any sort of communication, the impact of the message can be lost if the receiver is being bombarded with similar messages in a short period of time.

- Before creating an agent, first consider if a course announcement would be just as (or perhaps more) effective.
- If you are using a repeating agent with a daily or hourly frequency, carefully consider whether you want that message to go out every time the criteria are satisfied.
- If you are using a many agents, consider how many may go to the same students in the span of a few days.
Tip #2: Write the Email in Your Own Voice

While the automation of intelligent agents is great, there is no need for your email to sound automated.

• Write your message in a way that is consistent with the tone of voice and personality you use in class
• The more it sounds like your voice, the more likely your students are to think it is a personalized email from you to them rather than a canned message
• Use replacement strings (especially first name) to give it a personal impact
**Tip #3: Create Agents That You Can Reuse**

Because Intelligent Agents can be copied from one course site to another, if you write emails in a way that avoids the need to edit, they can quickly be re-enabled/rescheduled in your next offering.

- Use replacement strings to identify the course name/code
- Avoid use of specific dates (use “due today” instead of “due May 12th”)
- If you have components of the message that do need to be updated, make a note of them in the Agent description
**Tip #4: Be prepared to follow-up**

Intelligent Agents are great for connecting with your students, but the tool can only handle the initial email.

- Be prepared to continue the conversation with students who follow-up and allot time for that in your day
- If you have a large class, consider using a generic email address (e.g., code1000@uoguelph.ca) that the whole teaching team can access and share the load
INTELLIGENT AGENTS SUPPORT
Intelligent Agents Support

Intelligent Agents are supported by the CourseLink Support team.

CourseLink Support
Email: courselink@uoguelph.ca
Phone: X. 56939
Hours:
Mon-Fri. 8:30 AM-8:30 PM, Sat. 10 AM–4 PM, Sun. 12–6 PM

CourseLink Support also has a resource page for Intelligent Agents:
https://support.opened.uoguelph.ca/instructors/courselink/tools/content/intelligent-agents