



Business challenge

Bullying dents confidence, lowers self-esteem and can even lead to serious depression. To help tackle the issue in schools, WatsomApp wanted to empower educators to pinpoint bullying faster.

Transformation

WatsomApp created a gamified solution powered by AI from IBM® Watson® and developed in the IBM Cloud™, enabling educators to identify students with a high risk of becoming either a bully or a victim.



Gustavo Beltrán,
CEO,
WatsomApp

Business benefits:

Enables

faster responses to bullying, helping to resolve issues before they cause serious harm

Equips

students with the skills to recognize and address bullying in their classes

Improves

students' wellbeing and promotes more positive learning experiences

WatsomApp

Empowering teachers to proactively identify and prevent bullying with an AI-driven chatbot

Designed by Kio Artificial Intelligence S.L., a Spanish company specializing in AI solutions, WatsomApp is an online platform that helps educators reduce bullying in their schools. Combining gamification and machine learning techniques, WatsomApp identifies the students most likely to be the perpetrators and victims of bullying, and empowers them to take proactive measures to break the cycle.

“By continuing our close collaboration with IBM, we’re confident we have the AI technology and the scalability we need to help more children around the world.”

Gema Gutiérrez
User Experience Consultant
WatsomApp

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Tackling the causes of bullying

Bullying affects the whole of society, but it hits hardest in the classroom. Children who suffer from physical or psychological harassment can quickly become isolated and anxious, harming their mental health and inhibiting their education. In some cases, victims also develop depression.

WatsomApp, a startup based in Madrid, Spain, recognizes that bullying is becoming an increasingly serious challenge for educators around the world.

Gema Gutiérrez, User Experience Consultant at WatsomApp, explains: “Without a doubt, both the rise of social media and the ubiquity of smartphone ownership among young people magnify the negative effects of bullying. Because students are always connected with their peers online, bullies can follow them everywhere they go. And of course, a lot of this behavior will be largely invisible to parents and teachers.”

Through discussions with students, families and educators across Spain, WatsomApp saw that it typically took nine months for a child’s relatives and teachers to become aware that they were being bullied. The longer the harassment continues, the more likely it is to inflict long-lasting damage to the victim’s mental health. To tackle the problem, WatsomApp wanted to help educators identify and address bullying faster.

“There are many different personas involved in a classroom bullying scenario,” continues Gema Gutiérrez. “As well as the bullies and their victims, there are bystanders who see what’s happening and leaders who can influence their peers in positive or negative ways.”

“We realized that we could use analytics to identify the persona of each student in a class. By providing teachers and school psychologists with these insights, we knew that we could help them intervene to stop bullying in their classrooms before it had time to take root.”

“The IBM Global Entrepreneur program gives us access to leading-edge, enterprise-class AI technologies such as IBM Watson Assistant—without which, our solution would simply not be possible. Better still, we have access to the enterprise-class IBM Cloud platform to develop and run our services.”

Gema Gutiérrez,
User Experience Consultant, WatsomApp

Gaining fast insights before bullying takes hold

To capture the insights it needed, WatsomApp utilized the [IBM Cloud](#) to develop online games for children across Spain, overlaid with analytics that helps identify each child’s unique playing styles. By analyzing this data, WatsomApp identifies the persona that best fits each child.

After playing the games for around 30 minutes, children interact with an AI chatbot driven by [IBM Watson Assistant](#), [IBM Watson Natural Language Classifier](#) and [IBM Watson Natural Language Understanding](#). Through a series of dialog trees, the WatsomApp avatar gathers more information about potential instances of bullying, which is delivered in a confidential report to the school’s head teacher or education psychologist.

As well as delivering a virtual chatbot that children engage with via text, WatsomApp enables them to interact with its AI via emotive, physical robots. The company offers a child-sized robotic avatar named Snow and a smaller Q.bo One robot, which children can talk to using natural language via [IBM Watson Speech to Text](#) and [IBM Watson Text to Speech](#) APIs.

Gutiérrez explains how IBM became involved in the project: “Our office is based close to the IBM office in Madrid, and a meeting between our founder and CEO Gustavo Beltrán with a member of the IBM team kick-started our interest in IBM Global Entrepreneur program.

“The IBM Global Entrepreneur program gives us access to leading-edge, enterprise-class AI technologies such as IBM Watson Assistant—without which, our solution would simply not be possible. Better still, we have access to the enterprise-class IBM Cloud platform to develop and run our services. Since our initial meeting, the IBM offerings have become an integral part of our WatsomApp solution.”

Today, WatsomApp’s mission-critical infrastructure resides in the IBM Cloud, including its application servers, MongoDB databases and NGINX load-balancing platform.

Gutiérrez adds: “We have been working with the IBM Cloud and IBM Watson for more than two years now, and we find the platforms very intuitive. We’ve been noticing that children want to talk to the bot about a wide range of subjects, not just bullying. To keep them engaged, we have built conversational responses to new topics, which is straightforward to do and doesn’t require deep levels of technical knowledge. The response from our student users has been extremely positive, and we’re continually adding new content for questions such as: ‘do you enjoy school?’, ‘who are your friends with?’ and: ‘are you aware of any bullying in the classroom?’.”



Making classrooms safer, happier environments

Already, WatsomApp has achieved profound results and given educators the deeper insight they need to pinpoint and address bullying behavior.

In cases where WatsomApp discovers that a child is bullying other children in their class, the company typically finds that it is because they come from a home environment in which their behavior isn’t controlled or because they have not learned to empathize with their peers. When WatsomApp delivers the confidential bullying reports to a head teacher or psychologist, their response usually involves speaking with the bully, their victims and their families to start taking steps to resolve the issue.

“Educators can only address bullying if they know that it’s happening,” says Gutiérrez. “Our platform can bring these issues to their attention in as little as one month, which is in stark contrast to the nine months it typically takes to identify bullying.”

Today, around 3,000 students at a school in Spain are interacting with WatsomApp at regular points throughout the academic year. The company is also building a presence in Peru, and aims to make the platform available to more schools across the country and around the world.

By setting aside time for children to play the WatsomApp games and talk with its chatbot at regular intervals throughout the school year, educators can identify behavior trends in their classroom and monitor the effectiveness of their anti-bullying strategies.

“We find that children often feel they can be more open and honest when they’re speaking about their problems with our AI avatar than to an adult or even one of their friends,” says Gutiérrez. “In one case, a student confided in the bot about their struggles with a serious illness. As well as providing a safe space in which the student could talk through their feelings, WatsomApp was able to make the student’s school more aware of what they were going through and help them deliver the extra support the student needed to thrive.



“We know that our chatbot acts as an extremely valuable tool in rooting out bullying, because we continue to receive excellent feedback from children, head teachers, classroom teachers and school psychologists.”

Building on its success, WatsomApp is planning to create a mobile version of the solution—enabling students to talk with its AI avatar anytime, anywhere.

Gutiérrez concludes: “Detecting bullying with WatsomApp is already helping us to improve the mental health, wellbeing and learning experiences of children in Spain. By continuing our close collaboration with IBM, we’re confident we have the AI technology and the scalability we need to help more children around the world.”

Solution components

- IBM® Cloud™
- IBM Watson® Assistant
- IBM Watson Natural Language Classifier
- IBM Watson Natural Language Understanding
- IBM Watson Speech to Text
- IBM Watson Text to Speech

Take the next step

To learn more about IBM Watson Assistant, please contact your IBM representative or IBM Business Partner, or visit the following website: console.bluemix.net/catalog/services/watson-assistant-formerly-conversation

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