

Tecnologías de Comunicación Síncrona aplicadas al Sistema de Información para Tutoría: Acerkte

Synchronous communication technologies applied to the tutoring Information System: Acerkte

Síncronas Tecnologias da Comunicação aplicadas ao Tutorial do Sistema de Informação: Acerkte

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Resumen

En el Instituto Tecnológico Superior de Comalcalco se detectó la necesidad de implementar un sistema que permita a los docentes llevar un control y un seguimiento con el alumno en el trabajo de Tutoría. El uso del lenguaje y la comunicación en tiempo real es fundamental y de vital importancia en este trabajo, por ello se planteó desarrollar un sitio Web que permita al tutor llevar un control de sus tutorados y en este mismo sitio pueda hacer uso de las tecnologías de comunicación síncrona. Después de haber analizado las diferentes plataformas que ofrecían este servicio se optó por implementar la plataforma Arrowchat, la cual contiene varias aplicaciones, siendo una de ellas las salas de Mensajería Instantánea (Chat). Se espera que la comunidad estudiantil pueda utilizar esta herramienta y tener acceso a los servicios que proporcione el tutor o el servicio de psicología que la institución ha puesto a su disposición, todo esto en tiempo real. Entre los resultados que se esperan traiga el uso de esta herramienta es que el tutor pueda tener una comunicación más cercana con sus tutorados y esto lo ayude a detectar a tiempo los problemas de deserción escolar, de personalidad,

problemas familiares y sociales, etcétera y los canalice al área correspondiente para una mejor orientación, y esto se vea reflejado en una disminución de los índices de reprobación, deserción escolar, embarazos no planeados, etcétera, en la comunidad estudiantil de este instituto.

Palabras clave: tutoría, tutor, tutorado, comunicación síncrona, mensajería instantánea, plataforma, chat.

Abstract

The need to implement a system that allows teachers to take a control and follow-up with students in the tutoring job was detected in the Higher Technological Institute of Comalcalco. The use of language and communication in real time is fundamental and vital in this work, This was raised to develop a Web site that allows the guardian to control their tutees and on this same site making use of synchronous communication technologies. After having analyzed the different platforms offering this service they chose to implement the platform Arrowchat, which contains several applications, one of them being the rooms of Instant Messaging (Chat). Is expected that the student community can use this tool and have access to services provided by the tutor or the service of psychology that the institution has at its disposal, all of this in real time. Among the results that are expected to bring the use of this tool is that the guardian might have a closer communication with their tutees and this helps to detect early problems of dropout, personality, social and family problems, etc and refer them to the appropriate area for a better orientation, and this is reflected in a decrease of the rates of reproach, dropout, unplanned pregnancies, etc., in the student community of this Institute.

Key Words: tutoring, tutor, tutorado, tutee, synchronous communication, Instant Messaging, platform, chat.

Resumo

No Instituto Tecnológico Superior de Comalcalco a necessidade de implementar um sistema que permite aos professores manter o controle e acompanhamento com o Explicações trabalho do aluno foi detectado. O uso de linguagem e comunicação em tempo real é essencial e de importância vital neste trabalho, por isso foi proposto para desenvolver um site que permite que o tutor para manter o controle de seus orientandos e neste site pode fazer uso de tecnologias comunicação síncrona.

Depois de analisar as diferentes plataformas que oferecem este serviço optamos por implementar a plataforma Arrowchat, que contém várias aplicações, uma das quais salas de mensagens instantâneas (chat). Espera-se que a comunidade estudantil para usar esta ferramenta e ter acesso aos serviços prestados pelo serviço de tutor ou a psicologia que a instituição disponibilizou, tudo em tempo real. Entre os resultados esperados para trazer o uso desta ferramenta é que o tutor pode ter uma comunicação mais próxima com os seus pupilos e isso vai ajudar a detectar problemas de abandono precoce, personalidade, problemas familiares e sociais, etc., e canalizados para a área apropriada para uma melhor orientação, e isso se reflete em uma diminuição da taxa de insucesso, abandono, gravidez não planejada, etc., na comunidade estudantil deste instituto.

Palavras-chave: tutoria, tutor, tutoria, comunicação síncrona, mensagens instantâneas, plataforma, bate-papo.

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Introduction

The human being has many needs, including physiological and psychological [11], these is where it introduces many conflicts when self-actualise, that is why the Higher Technological Institute of Comalcalco [6] has been working from a couple of years in the Tutoring Plan, sensing the need to develop an application that facilitates the work of teachers in the area of Tutoring/Mentoring. According to the requirements set for the Web application that is being developed an instant messaging tool was included in the application, which will be of great help in the work of the tutor, since the student will be able to be in contact with their tutor and with professionals in the area of psychology, who will give then attention in real time. The role of the tutor focuses on learning and not teaching, therefore his figure cannot be built is as content expert, but rather as animator and a vehicle for autonomous learning [8].

If Information and Communication Technology (ICT) are used, the ways in which students can communicate with tutors will be more diverse, but for this purpose it is necessary to establish such

channels. This has been included within the Web site for the exclusive use of tutoring a communication Platform that contains Synchronous Communication tools, such as Chat rooms, which allow the students of the Institute have a communication in real time with their tutor or the area of Psychology. At the same time, using this synchronous communication tool allows the tutor give follow-up to his tutees in real time, making use of instant messaging (chat).

General objective

Install and configure a communication platform that contains an instant messaging tool in the Higher Technological Institute of Comalcalco to help promote communication between tutors and the tutored and thereby to detect in time personal and/or social problems affecting tutoring to refer them to the appropriate area and thereby lower rates of reproach, dropout, unplanned pregnancies, etc, that affect the institution.

MATERIAL AND METHODS

This project is being carried out at the Higher Technological Institute of Comalcalco located on Vecinal Road Comalcalco - Paraíso Km. 2, Ra. Occidente 3ra. Sección, Comalcalco, Tabasco; México. 86651. This Institute is now 22 years old and currently enrolled 3 730 students, who are studying the different courses offered by the Institute.

The HTIC has defined its area of influence in the municipalities of Comalcalco, Paraíso, Cárdenas, Cunduacán, Jalpa de Méndez, Nacajuca and Centro, classified by order in the recruitment of students [6].

Before you start to respond to the problem, should handle the following concepts to have a clearer idea of what we wish to do:

Instant messaging. It is an intermediate point between systems chat and email messages [7]. It is a very powerful tool that in recent years has gained strength by its users and is the engine that drives today's social networks. In education is a tool that does not provide good results in its implementation [10].

"The tendency to use increasingly Internet and with it instant messaging applications instead of calling, is now a reality," says Jaume Montane, cofounder of Monsan [9] Group.

One of the tools used by tutors is WhatsApp. While it is true that WhatsApp is now the most popular name in the instant messaging service, it would be a mistake to think that such leadership is guaranteed in the future especially if we know that Asian markets will be the highest volume of messaging traffic generated during the next 4 years [4].

Chat. It is a type of synchronous communication in real time (instant communication), which works thanks to the properties that provides connectivity to the Internet network, by registration in a user account to access the instant messaging service [5]. As a communication channel, the chat is one of the clearest examples in which written language can reflect the behavior of human adaptation to different types of communication according to the media that the same generate and propose for interaction. In this regard, factors such as the conditions imposed virtual communication, speed of interaction, connectivity and the possibility of multiple simultaneous chats define a particular dynamic electronic writing [12]. Using the chat we can solve communication problems generated between the tutor and tutored.

Arrowchat. It is a platform licensed software offering a suite of applications. It is a service that allows you to deploy a full service Facebook-style chat. Chat design is almost identical to the aforementioned social network as it is based on a bar that stands on the edge of the page and allows us to maintain conversations with multiple users using tabs and maximize and minimize windows. Of course, the great advantage that is so similar to Facebook Chat is that many users may feel familiar and easily identify all options. ArrowChat is based on jQuery, chat software for websites, but it was in March 2010, according to research, when this service was born. "We designed ArrowChat to be the leader chat software for websites. Your customizable script and wide selection of modifications and themes make it a good choice for implementation or integration into any website," says Jason Stackman, CEO and ArrowChat founder,

Requirements: The requirements for the installation of Arrowchat are: hardware, Internet, remote server license.

The project was developed in three stages:

Step 1. Research platform.

Step 2. Setting the Arrowchat.

Step 3. Implementation in the application web: Acerkte.

Which are presented below

Development stages

STEP 1. Research platform. a comparison between the various instant messaging platforms was performed. ArrowChat currently has a large number of messaging clients for websites. Cometchat it stands out as main rival ArrowChat, because they are similar characteristics between them, both competing for the same type of customer, but it is very heavy and some accessories sold separately [2]. Other platforms were analyzed: phpFreeChat, PUSHEO, AJAX IM. (See Table 1).

Table 1. Platforms analyzed

CUADRO COMPARTIVO DE ALTERNATIVAS DE SERVICIO DE CHAT EN TIEMPO REAL					
NOMBRE	ArrowChat	CometChat	Ajax IM	Pushéo	PhpFreeChat
SITIO OFICIAL	http://www.arrowchat.com/	https://www.cometchat.com/	http://ajaxim.com/	http://www.pushéo.com/	http://www.phpfreechat.net/
DESCRIPCIÓN	ArrowChat es un software de chat en vivo basado en jQuery que utiliza PHP y MySQL. Se coloca en la parte inferior de su página web similar a Facebook Chat. ArrowChat es actualmente el mayor alternativa y rival de CometChat.	Añade el servicio de chat en cuestiones de minutos y \$1. CometChat es un costo por única vez. No hay costos mensuales o anuales. Sólo actualizaciones, soporte de audio / video de chat (WebRTC única) y función de chat Gtalk requieren una licencia activa (es decir, la renovación una vez al año). Algunas funciones tienen costos adicionales como se menciona en nuestra requisitos del sistema página. Se ejecuta en cualquier servidor.	Ajax IM ("Ajax Instant Messenger") es un marco de mensajería instantánea, navegador céntrica. Utiliza AJAX para crear un tiempo real (o casi en tiempo real) entorno de IM que se puede utilizar en conjunción con la comunidad existente y software comercial, o simplemente como un producto independiente.	Pushéo es un servicio ágil y firme que le permite mezclar comunicación en tiempo real en cualquier aplicación, sin ninguna carga adicional en sus servidores. Aliana el camino para una comunicación transparente en todas las principales plataformas. Todo esto en tan sólo 10 líneas de código. Pushéo tiene bibliotecas masivas, preciados y organizadas para toda la web de primera y plataformas móviles.	PhpFreeChat es un servicio totalmente gratuito de Chat que ofrece salas de chat públicas y privadas para sus visitantes. Además, la interfaz es personalizable en equipos de escritorio, tabletas y teléfonos inteligentes para adaptarse a su diseño de sitios web.
CARACTERÍSTICAS	<ul style="list-style-type: none"> ✓ Video Chate ✓ Salas de chat ✓ Aplicaciones ✓ Notificaciones ✓ Emergente de Chat ✓ Temas ✓ Panel de administración completa ✓ Soporte en tiempo real ✓ Soporte para dispositivos múltiples incluyendo Smartphones ✓ Invitado de Chat ✓ Group Chat y mucho más 	<ul style="list-style-type: none"> ✓ Permite a los usuarios del sitio charlar con los demás, así como a sus amigos Gtalk. ✓ Pueden compartir imágenes colaboran junto con Writeboards. ✓ Videos de difusión ✓ Jugar juegos y mucho más, manteniendo su privacidad. 	<ul style="list-style-type: none"> ✓ Agregar/Eliminar/Bloquear contactos, crear salas de Chat, Mensajes privados ✓ Lista de grupos, Emoticons,, Avatars, Perfiles, etc. ✓ Para los administradores se incluye un Panel de control para ver los usuarios en línea, expulsarlos, banearlos o hacerlos administradores. 	<ul style="list-style-type: none"> ✓ Pushéo la comunicación se basa en el flujo de petición-respuesta tradicional de la web. ✓ Pushéo entrega los mensajes aligerar rápido y con cero ajetreo. ✓ Funciona en todos los navegadores, que no requiere ningún tipo de instalación en el cliente en absoluto! 	<ul style="list-style-type: none"> ✓ Interfaz web themable ✓ Interfaz web receptivo (móvil, tableta, escritorio) ✓ Gestión multi-usuario ✓ Sistema de actualización de votación (con ajax) ✓ Sistema de autenticación modular (integración phpbb3 disponible) ✓ Sistema para permitir la extensión características gancho ✓ Sistema de archivos utilizado para el almacenamiento (sin base de datos)
PRECIO	\$ 45 Comenzando (10 días de prueba gratis)		Gratis	Gratis y de pago (gratis para la concurrencia de 10 usuarios)	Gratis

STEP 2. Arrowchat configuration was performed: In this stage the tests were performed on a server and software requirements were followed (see Figures 1 and 2).

The only thing ArrowChat required to be installed on your server [1] is:

- A web server: any
- PHP Version 4.4 or higher
- Database: MySQL 4.0+ o MSSQL 2005 +

Figure 1. Setting Administrator

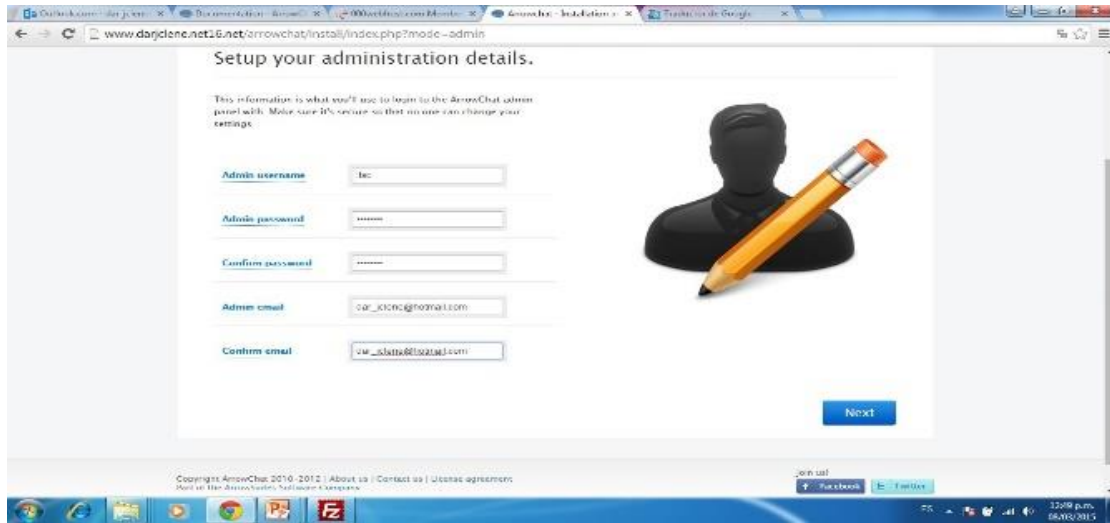
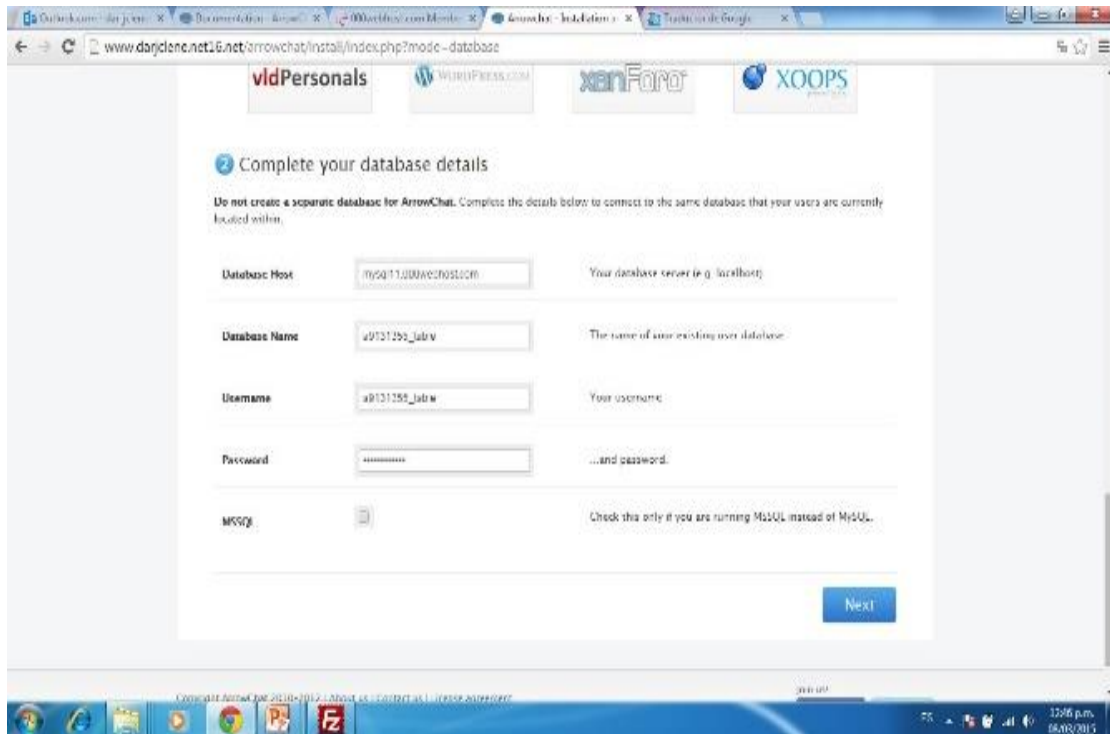


Figure 2. Configuration Database



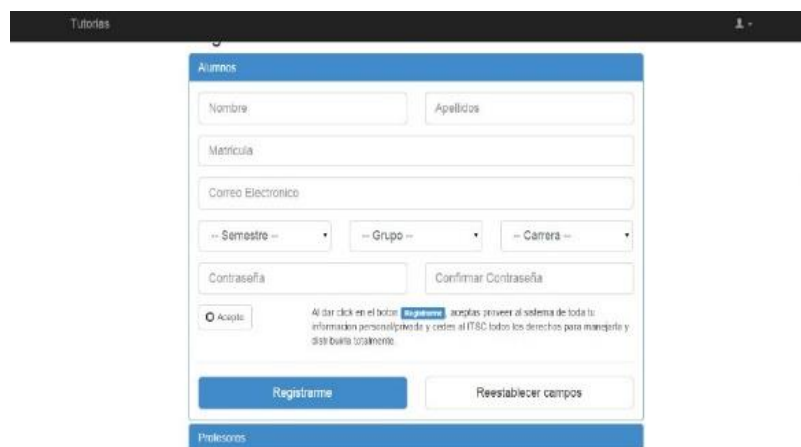
Stage 3. Implementation in the Web application: Acerkte

The Acerkte project's main objective is to develop an online intelligent system that allows the application of tutorials and detection needs students in higher education using information systems platform and the implementation of Arrowchat a communication will be maintained in real time (see figures 3 and 4).

Figure 3. Application of tutorial system Acerkte



Figure 4. System Application Tutorías Acerkte



Results and conclusions

We can conclude that instant messaging is part of one of the most valuable tools in social networks, as well as the implementation of communication between the tutor and the tutored, and that implementing the Arrowchat platform within the website: Acerkte, is remove temporary barriers like distance and is given to staking a tool to stay connected in real time. It is also a tool that promotes interaction among participants who seek and need to be actively communicated.

Below are some graphs with the results of surveys (see Tables 2 and 3):

Table 2. Survey Results after making a demo

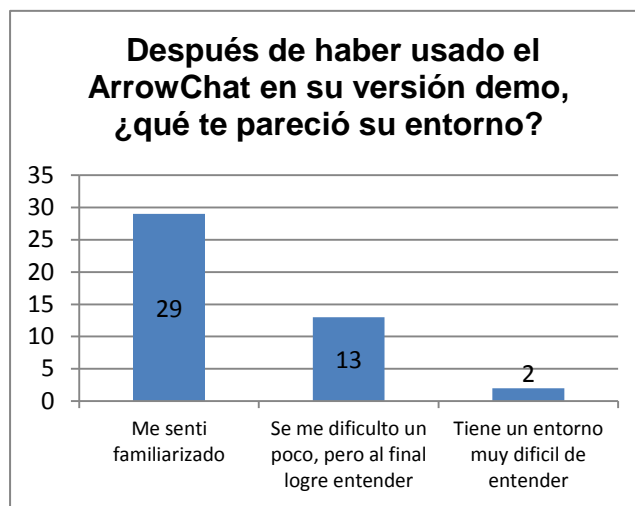
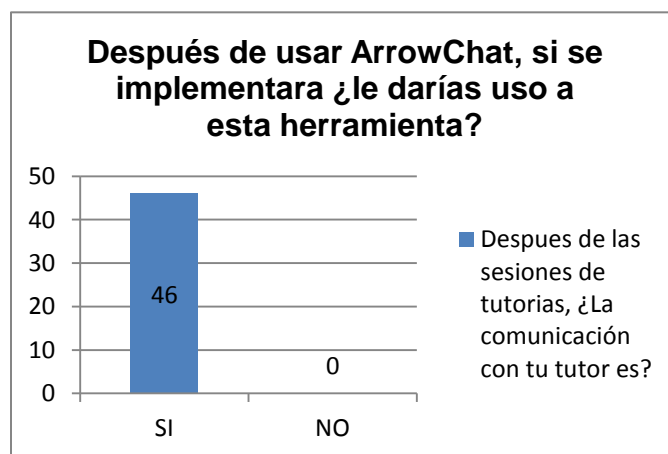


Table 3. Results of the survey after having made a demo



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