Establishing a Pricing Structure for Software Products

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Abstract

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Establishing a pricing structure for software products

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This thesis is a case study that explores how to establish a pricing structure for software products. The objective is to provide a guideline to establish a pricing structure for Viope Solutions Oy. A new pricing structure is crucial for the company due to recent changes in its business such as internationalisation and new product launches.

The literature review introduces five attributes of a pricing structure. They are the unit definition, price determination, price segmentation, versioning, and bundling. Much research shows that different customers value a product differently. This leads to the challenge of how a pricing structure could capture the heterogeneity in the customers' perceived value. The five attributes are tools to establish a pricing structure that could perhaps resolve this challenge.

From the perspective of the software business, the author studies and analyses how software products are priced and licensed. A software pricing model in general is broken down into four factors which are what is sold, license options, license terms, and payment methods. There is no complete and fixed model to price software products. Thus, a software pricing model should be established based on the product's value to customers as well as the companies' business objectives.

The empirical study was conducted using a qualitative research method. The study uses both secondary and primary data. The secondary data was gathered from companies' annual reports and experts' analyses. The primary data was collected from field observations and semi-structured interviews with Viope's owner. The data was then analysed using grid analysis technique.

A direction to establish Viope's pricing structure is the final outcome of this thesis. It explains how to segment Viope's customers, how to create different versions of its products, how to bundle its offerings, and how to select a suitable pricing model.

Key words pricing structure, licensing, software business, marketing

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1 Introduction

This thesis is conducted for an eLearning software company, Viope Solutions Oy. The company currently provides software products and services to schools and institutions mainly in the domestic market, Finland, and in other Western European countries. The thesis idea is derived from the fact that Viope has established an internalisation plan and is going to launch new products. The purpose is to serve a wider market segment in order to boost its international expansion and diversify its customer base. Due to these future changes, Viope's current pricing structure is no longer suitable, which leads to the need of modification.

Much research claims that the alignment of a company's pricing strategies with its business objectives is important for a business success. Strategic pricing decisions and prompt adaptability have never been more crucial in this dynamic economy. According to Nagle, Hogan and Zale (2011, 17), organisations urge to modify pricing strategies, when there are changes in organisational operation and markets. The rapid technology revolutions, business globalization, and increasing competition require quick and prudent adaptation to retain sufficient financial flows and grow more profitably. The well-known "razor-blade" pricing strategy of Gillette is a good illustration for these claims. As Anderson (2009, 11) explains this is a strategy in which a product (razor) is sold at a low price or even is given for free to stimulate the demand for a related product (blade) with a higher price. Similarly, iTunes revolutionises the music industry with a new pricing model, which is selling individual songs instead of albums (Nagle et al. 2011, 17). Introducing new pricing metrics at the right time along with suitable marketing strategies, the two organisations have succeeded and gained great market shares.

A pricing structure is a crucial parameter of a pricing strategy. It displays the pattern how total transaction prices are defined (Smith 2012, 160). Meehan, Simonetto, Montan, and Goodin (2011, 68) claim that a pricing structure creates significant impacts on brand communication to customers, customer segmentation, and overall business goals. In financial aspect, Lehmann and Buxmann (2009) note that pricing structures could affect companies' turnovers and profits. Consequently, Smith (2012, 160) considers a pricing structure as a "critical strategic weapon" because it influences the industry dynamics. Smith (2012, 161) addresses two questions should be taken into consideration when forming a pricing structure (1) "What drives the value that customers place on the offerings?" and (2) "How can the firm capture prices in proportion to the value that customers perceive?"

1.1 The objective and research questions

This thesis aims to study how pricing structures for software products are established. The objective is to provide Viope an adaptive direction to redesign its pricing structure. The company opts to modify its current pricing structure due to the international expansion and launching plans of new products.

Pricing could be taken from different perspectives such as accounting, economics, and marketing (O'Connor 2009). The study will focus on the marketing perspective of pricing. The goal of a pricing structure in marketing is to communicate to customers the pattern how price is set as well as facilitate the achievement of marketing strategies and business objectives (Smith 2012 160; Meehan et al. 2011, 68).

In order to achieve the objective, this study targets to answer two questions:

- What are attributes of a pricing structure?
- What are criteria should be considered when establishing Viope's pricing structure?

1.2 Thesis's structure

The thesis is divided into two parts. The first part is literature review (chapter 2) designed to answer the first research question. It aims to provide background information such as elements of a pricing structure and the formation of software pricing models. The second part is the empirical study (chapter 3) answering to the second research question. This part is conducted for the case company – Viope Solutions Oy. The purpose is to generate a direction to design Viope's pricing structure.

Chapter 2 contains two main topics: elements of a pricing structure and the formation of software pricing models. A pricing structure includes five elements which are the unit definition (section 2.1), price determination (section 2.2), price segmentation (section 2.3), versioning (section 2.4), and bundling (section 2.5). The purpose of these sections is to answer to the first research question "What are attributes of a pricing structure?". From the overall view of a pricing structure, the chapter is then narrowed down to software pricing models in section 2.6. This section aims to provide more applicable and practical information relating software business to serve the development of the empirical study.

Chapter 3 contains four sections. The first section introduces research methodology with the target is to explain how data is collected and analysed in this study. The second section first introduces the global learning management system industry focusing on competition aspect. It then explores what are the key players in this industry and how they structure the pricing of their products. This section intends to provide a benchmark for Viope. Eventually, a direction to design Viope's pricing structure is developed based on the analysed and collected information.

2 Literature review

This chapter studies what are elements of a pricing structure and how the elements are developed to form the pricing structure. Then it takes a closer approach to the software business and explores how software pricing models are created.

2.1 Defining the unit

Smith (2012, 170) indicates that the fundamental factor in creating a pricing structure is determining the unit of a product or service that is priced. At a first impression, how a product is priced appears as charges per unit sold. However, establishing a pricing structure is much more complicated. It is more than just defining the unit price according to the number of products sold; in fact, companies should consider the heterogeneity in customers' willingness to pay. This is because different customers have different willingness to pay and a product's value likely varies depending on customers' purposes of use (Smith 2012, 160; Viswanathan 2005). Therefore, Smith (2012, 161) claims that price should be in alignment with the benefits customers gain from the product rather than the consumed units.

There are several ways to define the unit that is associated with demand heterogeneity. First, the unit can be set based on the ability to use the product. The transition from software licensing to software rental is a good example of this. It is common nowadays that software products are sold as subscription-based offerings in stead of as permanent licenses. The subscriptions often define a fixed time usage period and necessary features of the product that suit customer needs. (Smith 2012, 162)

Second, multipart pricing can be used to redefine the unit. Multipart pricing is an approach in which a transaction fee is calculated from more than one metric. For example, software companies charge a fixed basic price plus variable unit fees depending on the amount of use. (Smith 2012, 162)

Add-ons, versions, and bundles are other methods of defining the unit. Multiple products or add-on services are combined in a sales offering. This aims to combine the benefits of various products and services to customers in order for them to achieve their goals of use that they seek from a purchase. (Smith 2012, 162)

2.2 Price determination

Prices are often determined based on three factors: costs of the product, customers’ value realization, and competitors’ prices.

2.2.1 Cost-based pricing

It is a norm that the fundamental goal of any business is survival, which means avoiding loss to reach break-even and be profitable. Therefore, companies tend to price their products or services mainly based on product's costs so as to yield a sufficient profit. This process of pricing is known as cost-based pricing. (Schindler 2012, 21)

This pricing approach is popular because of simplicity. In most cases, this method is achieved by using cost accounting (Harmon et al. 2009). For pricing software products, it seems challenging because of the difference in cost structure, low fixed costs but high variable expenses (Bontis & Chung 2009). However, this approach might be suitable for Software as a Service (SaaS) business model (Lehmann & Buxmann 2009).

According to Harmon et al. (2009), there are five most common pricing models for IT services following the cost-based approach (see Table 1). Each model has different patterns how a transaction is defined and how prices are set. However, the common thing in these models is that the prices are initiated from product costs.

Model	How it works
Flat pricing	A total fixed price is charged for an unlimited use. Positive return on investment is a main goal of this approach.
Tiered pricing	Software benefits are combined in one tier to match user requirements and willingness to pay. It aims to connect product costs to perceived customer value.
Performance-based pricing	Software is priced by measuring the processor of a machine. A drawback of this method is inconsistency, which means the same software is priced differently when running on different machines.
User-based pricing	Pricing is based on the number of users using the software within a defined period of time.
- **Per-user pricing**	A fixed price is charged for the defined number of users.
- **High water mark pricing**	Prices are based on the maximum number of concurrent users.
- **Per-seat pricing**	A fixed price is charged for the defined number of users limited in a specific location.
Usage-based pricing	Charges are based on the actual usage amount.

Table 1: Cost-based pricing models for IT services (Harmon et al. 2009)

2.2.2 Value-based pricing

Value-based pricing attempts to set prices based on the assessment of a product value which customers require and perceive (Schindler 2012, 30). Customer demand and value realization is the determinant in this pricing approach instead of costs, with an objective is to achieve long-term benefits. Harmon et al. (2009) explain the implementation of this pricing approach in software business. First of all, the level of customer willingness-to-pay should be determined. This is achieved by defining customer value drivers (see Table 2) and their importance in the buying decision. The customer value drivers are mental connections that convey customers' feelings about the trust in product and company, the product differentiation, and the reason to buy. After understanding the value drivers, the product benefits should be reflected to these drivers and subsequently be captured by the pricing strategy. Harmon et al. (2009) conclude that companies cannot be profitable if pricing is not based on customer willingness-to-pay.

Value driver	Foundation of customer's perceptions
Economic value	Costs of acquiring or using a product
Performance value	The utility of the product's functionalities and advantages
Supplier value	The credibility of the provider and trust in brand
Buyer motivation	Buyer's mental motivation to purchase
Buying situation	Situational contexts: task definition, resource capability, time horizon, social influences, experience level, availability

Table 2: Customer value drivers (Harmon et al. 2009)

2.2.3 Competition-based pricing

Schindler (2012, 28) describes the competition-based pricing approach as the process of setting price which is founded on the benchmark of competitors' prices and price-related behaviours. Lehmann and Buxmann (2009) claim that in addition to value-based approach, this approach is of importance in the software industry, especially if there is a similarity among products in the market. This is because acquiring great market share is crucial and challenging in such markets that have network and lock-in effects.

2.3 Price segmentation

A market often involves a diversity of prospects with different needs, value drivers and abilities to purchase a product. Among this diversity, some with similar characteristics could be grouped into the same market segments. Schindler (2012, 210) notes that a product's best price varies across segments. This is because customers across different segments perceive value of a product differently. Additionally, the costs to serve them might vary (Nagle et al. 2011, 63). Due to these differences, a product should be priced differently across segments to maximise profits and to be able to serve different customers with different willingness-to-pay. This technique of pricing is known as price segmentation (Schindler 2012, 212: Nagle et al. 2011, 63), or also is referred to as price discrimination (Shy 2008, 5; Lehmann & Buxmann 2009).

This pricing strategy tends to stimulate market share increase and market expansions (Shy 2008, 6) as well as to help achieve greater revenues and profits in industries that have high fixed-costs (VanAuken 2008). This is why price segmentation is likely possible and crucial in pricing software products (Lehmann & Buxmann 2009; Sundararajan 2003). Producing and modifying software products requires high fixed-cost but relatively low variable costs, which enables sellers to serve different customers with different willingness to pay.

There are certain challenges to achieve price segmentation. Lehmann and Buxmann (2009) state that customer willingness-to-pay is the key factor to segment prices of a product. However, Varian (1995) argues that it is difficult to capture the actual willingness-to-pay of different customers because customers often neglect to reveal this information (Schindler 2012 213). Another challenge is how to keep customers with high perceived-value in the higher price segment (Varian 1995; Schindler 2012, 213). This is related to arbitrage problem when a customer in the lower price segment buys the product with a cheaper price, then resells it with a higher price to others (Schindler 2012, 213).

To prevent these nuisances, companies need to create pricing fences which can be used as means for customers to expose which segment they most likely belong to (Meehan et al. 2011, 71). In other words, the fences are referred to as criteria that customers must acquire to be eligible for lower prices (Schindler 2012, 213). This section will review techniques how to achieve price segmentation by establishing different price fences.

2.3.1 Segmenting by customer characteristics

Customer characteristics are used to create a price-segmentation fence when customers are charged differently for the same product due to their perceptible characteristics (Nagle et al. 2011, 80; Schindler 2012, 215). The characteristics could be identifiable such as age, profession, and commercial status (Shy 2008, 7). Often price segmentation fences cannot be decided depending on observable customer characteristics (Nagle et al. 2011, 81). In fact, through discussions and negotiations sellers can determine suitable segments and prices (Schindler

2012, 216; Nagle 2011, 81). In software commerce, this technique is often implemented in the form of charging different prices to private and commercial customers (Lehmann & Buxmann 2009).

In some cases, using customer characteristics to segment prices might leads to fairness, trust, and repurchase intention issues (Grewal, Hardesty & Iyer 2004; Schindler 2012, 215). This is because customers tend to feel being treated unfairly when noticing others are paying a cheaper price. Thus certain degree of clarifications for price differences could probably help to neutralise the negative feelings (Grewal et al. 2004).

2.3.2 Segmenting by purchase quantity

Besides customer characteristics, purchase situation characteristics, such as purchase quantity, could be an approach to define price segmentation fence. Purchase quantity sometimes influences the price of a product (Lehmann & Buxmann 2009). Lehmann and Buxmann (2000) state that this tactic is commonly applied in software business by offering quantity discounts. There are several types of quantity discounts as shown in Table 3.

Quantity discount model	How it works
Order-size discount	Offer a low per-unit price in great quantity orders that are placed at one time
Volume discount	Applied to large size orders placed over a certain period of time
Cumulative-purchase discount / Step discount	Offers frequent customers a cheaper price for new purchases or purchases exceeding a certain amount set by the providers.
Fix-charged pricing	One price is charged for unlimited use of a service/ product. Its implementation in the software industry is possible because of low variable production costs.
Two-part pricing	Includes a fixed fee that is independent of the usage and a per-unit price that depends on the usage measured by, i.e. time, transactions

Table 3: Quantity discount models (Schindler 2012, 216-7; Nagle et al. 2011, 85; Sundararajan 2003)

Schindler (2012, 216) and Lehmann and Buxmann (2009) favour the usage of purchase quantity over customer characteristics. This is because price segmentation by purchase quantity is based on customers' decision. This means it is their own decision to choose whether to buy a greater amount to get discounts or not, whereas they cannot have such possibilities in the other method.

Nagle et al. (2011, 84) mention costs, price sensitivity, and competition as the three factors that make price segmentation by purchase quantity justifiable while Schindler (2012, 217) indicate costs, price sensitivity, and product value to customer. First, they both agree that operation costs are lower in larger orders because costs of selling and serving a customer are do not change when purchase quantities change. Second, they both claim that customers who buy greater amounts tend to be more price-sensitive because they are more likely aware of available alternatives and seek for the best possible deal. For this reason, Nagle et al. (2011, 84) suppose these customers turn to be more attractive to many sellers, which explains the increase of competition in chances of doing business with them. Schindler (2012, 217) mentions product value to customer is a crucial element because once customers made a larger order, they tend to value the product highly.

When choosing purchase quantity as a price-segmentation fence, there are certain drawbacks should be considered. Quantity discounts should be kept at a relatively moderate level to prevent arbitragers. Another drawback is purchasing alliances - intermediaries between groups of buyers - attempt to order large quantities and distribute among their members. (Schindler 2012, 218)

2.3.3 Segmenting by time of purchase

A product's prices could vary according to the time when the product is purchased or paid. Time of purchase could be used to segment prices when the difference in time of purchase influences to the costs of operation. This strategy might benefit companies when there are significant variations in demand associated with the difference in time of purchase. It is also a solution for selling products that have limited time of validity. Periodic and promotional discounting are two forms of segmentation by time of purchase. (Schindler 2012, 231; Nagle et al. 82-3; Buxmann & Lehmann 2009)

Periodic discounting happens repeatedly and predictably in a time cycle (Schindler 2012, 232). This strategy aims to maximise the reservation price of the magnitude of customers who would rarely buy at the normal price (Dolan & Simon 1996, 255). The product could be sold at the regular price during high-price periods and at discount prices during low-price periods. It is an optimal situation for periodic discounting when the proportion of low-value customers in the market is large enough (Dolan & Simon 1996, 258), and the discount is crucial enough for the customers to wait for sale seasons (Schindler 2012, 232-4).

In contrast to the aforementioned discounting method, promotional discounting occurs occasionally and unexpectedly often with the purpose of promoting a new product and its benefits. This strategy is considered as a price-segmentation because it segments the customers into two groups, well aware and poorly aware of the product. For the poorly aware segment, discount price is an encouragement for them to try out the new products. Companies should notice that promotional discounting should happen unexpectedly and in a short period of time otherwise it would cause a decrease in the buyer's reservation price towards the product. (Schindler 2012, 236-7)

2.3.4 Segmenting by purchase location

A product might be sold different prices in different regions or countries (Lehmann & Buxmann 2009). Customers' price sensitivity, product's perceived value, and costs may differ between locations because of numerous factors such as differences in income levels, taxes, costs of operating risks, and intensity of competitions (Schindler 2012, 251; Nagle et al. 2011, 81-2). This is why purchase location is considered as a factor to segment prices.

There are several constrains that affect price-segmentation by geographical location. First, the conflict in price displaying that engenders customer awareness and negative feelings of price differences over locations. Second, in international commerce, companies might encounter intervention of local government, such as price controls and protective tariffs. Third, when selling in developing countries, companies often face the challenge how to price low enough to serve the local customers. To overcome this challenge, companies can keep a product's nominal price affordable by, for example, selling it on a per-use or single-transaction basis instead of selling the product's ownership. (Schindler 2012, 261-7)

2.3.5 Choosing a price segmentation

As mentioned above, some of the price segmentation fences might engender the fairness and trust issues. There are certain considerations companies should taken into account when determining a price segmentation fence. Schindler (2012, 223) supports the use of purchase-situation characteristics over customer characteristics. Research shows that customers seem to favour to the use of purchasing time over the use of customer characteristics (Grewal et al. 2004). However, there are not significant differences in customers' perceptions of trust between these two segmentation techniques. Grewal et al. (2004) suggest that the strategies which are considered as "contrary to norms or industry practice" are less trusted in comparison to those seem to be "consistent with norms or industry practice".

2.4 Versioning

Versioning is another parameter of a pricing structure. A basic product could be elaborated into several versions with variations of features and functionalities. It could have a degrading version and an upgrading version. Or it could be offered in different versions with fewer features or with more features. Some elements which are used in versioning software products are speed of operation, features, user-interface and convenience. Versioning attempts to set price based on customers' reservation price and usage purposes. This method allows customers to select a product version with features that serves their needs. (Smith 2012, 195; Schindler 2012, 219; Hogan and Nagle 2006; Viswanathan & Anandalingam 2005)

Versioning is a price segmentation method. Smith (2012, 197) mentions three levels of versioning: good, better, and best with three levels of pricing: entry-level, higher, and the highest respectively. The good-level product has the basic features for basic use. Sometimes the good-level product comes with diminishing features, which would make the product less or totally not functional for customers with higher willingness-to-buy, yet suitable for those with lower willingness-to-buy (Varian 1995; Hogan & Nagle 2006; Schindler 2012, 221). The best-level product is with the most enhancing-features, even sometimes with luxury characteristics. This version targets to customers with the highest demand and willingness–to-pay. (Schindler 220-1; Smith 2012, 197). The better-level product is at the middle range of the good-level and best-level products in terms of functionality and price (Smith 2012, 197).

Much research claims that versioning seems to be effective and profitable. Varian (1995) asserts that companies cannot serve customers in low reservation price segment without a lower-functional version. This strategy enables companies to generate revenues from this segment without affecting sales in the high willingness-to-pay segment (Schindler 2012, 220; Varian 1995). Viswanathan and Anandalingam (2005) also note that using versioning can reduce piracy. They, however, warn that a multitude of versions may confuse customers as well as decrease the sales to the high reservation price segment.

2.5 Bundling

Another dimension of a pricing structure is price bundling. A bundle is a combination of multiple products and/or services, which is offered as a package with a single price (Schindler 2012, 222; Meehan et al. 2011, 70). Shy (2008, 7) asserts that price bundling is only suitable to the market with elastic demand. In addition, Wu, Hitt, Chen, and Anadalingam (2008) claim that bundling requires no variable costs. Therefore, this strategy is relevant and prevalent in the software industry because it satisfies the requirements (Varian 1995; Lehmann & Buxmann 2009).

Price bundling benefits sellers in various aspects, such as reducing cost-to-serve, preventing entry of new competition, segmenting prices, and improving products' quality (Viswanathan & Anandalingam 2005; Nagle et al. 2011, 67). From customers' perspective, the benefits are cost reduction and better compatibility between products of the same brand (Viswanathan & Anandalingam 2005). Additionally, research indicates that customers are more willing to pay one single price for a package of multiple products or services rather than paying separately for different products (Kahneman, Knetsch, & Thaler 1991). Yadav and Monroe (1993) indicate that customers obtain greater savings on buying bundles than purchasing independent products. For markets that have network effects, such as the software industry, bundling helps to increase the scale of product distribution (Lehmann & Buxmann 2009). A well-known example of bundling in the software industry is Microsoft Office products. Microsoft sells the products in packages which consist of multiple tools such as Word, Excel, Power Point, and Outlook.

2.5.1 Price segmentation with bundling

Price bundling is a price segmentation method, which exploits the diversity of product valuations referred to as heterogeneity in demand (Smith 2012, 215). When the products are valued differently across segments, they could be packaged and sold as a “crossover” or at an average sum price (Varian 1995; Schindler 2012, 222-3). Alternatively, the product package could be priced differently to different segments (Nagle et al. 2009, 66). Smith (2012, 216) explains that price of a bundle should be lower than the sum of the products’ prices, but higher than the price of each product when sold separately. Price bundling is most profitable when reservation prices of products in a bundle are inversely proportional, and the products have low incremental costs. On the other hand, it is least efficient when the reservation prices are positively correlated and the incremental costs of production are high. (Viswanathan & Andalingam 2005; Smith 2012, 220)

Price bundling helps to capture higher profit by reducing the demand heterogeneity (Varian 1995; Smith 2012, 216). This is because price bundling is considered as a price-segmentation fence between different segments, which offers each segment a discount on less valued products (Smith 2012, 216). Bakos and Brynjolfsson (1999) also claim that it is more feasible to project the demand of a package of numerous products than that of each product. In contrast, Dolan and Simon (1996, 246) note that estimating the demand of bundles is complicated and requires relatively profound knowledge of every customer and market segment.

There are two methods of price bundling: offer-bundling and product-bundling.

2.5.2 Offer-bundling

There are different forms of offer-bundling such as pure-bundling, mixed-bundling, unbundling, and customised-bundling, which are applied in correspondence to market situations and product types (Lehmann & Buxmann 2009; Smith 2012, 217-9). In pure-bundling, multiple products are bundled together, sold as a fixed price, and cannot be sold separately. On the contrary mixed-bundling allows the products to be sold separately as well as in a bundle (Viswanathan & Anadalingam 2005; Lehmann & Buxmann 2009).

Unbundling happens when products can only be sold independently (Lehmann & Buxmann 2009). Comparing to the other forms of bundling, unbundling is more favoured if the marginal costs are high while transaction and distribution costs are low (Nagle et al. 2011, 71; Viswanathan & Anadalingam 2005). Additionally, unbundling is likely effective when there is a correspondence in the products' reservation prices (Dolan & Simon 1996, 231).

Customised-bundling offers the flexibility within certain conditions to choose which ones from a pool of products to be aggregated (Lehmann & Buxmann 2009). Sellers determine the price and size of the bundle (Viswanathan & Anadalingam 2009). Hitt and Chen (2005) claim that customised-bundling is effective when customers are financially restrained, marginal costs are of negligible value, and not all products are positively valued. Presuming incomplete information about customer willingness-to-pay, Wu et al. (2008) conclude that customized-bundling surpasses unbundling and pure-bundling.

2.5.3 Product-bundling

Another dimension of price-bundling is bundling according to product types. In the software industry, the software often comes with maintenance and support services in a bundle (Lehmann & Buxmann 2009). According to Cusumano (2007), software companies' turnovers arise equally from those three sources. The revenues of software companies are dramatically shifting from merely product sales to maintenance, support and other service sales (Cusumano 2007; PricewaterhouseCoopers 2007). Some companies even offer software products free of charge but obtain great income streams from maintenance and support services (PricewaterhouseCooper 2007). A product bundle could be offered in different forms, such as bundling products and services from multiple suppliers (Bakos & Brynjolfsson 1999), or bundling new products with an existing platform product (Cusumano 2007).

2.6 Software pricing models

This section attempts to introduce various models of how software is priced and licensed. A license is a tool for a software holder to grant the legal rights of use to a user (Morin, Urban & Sliz 2012). Bontis and Chung (2000) claim that there is no fixed formula for setting a software price. This is why there are numerous companies offering multiple pricing schemes, which seems to be beneficial in terms of enhancing service differentiation and customer segmentation (Chouharry 2009; Bala & Carr 2005; PricewaterhouseCoopers 2007).

Nayak (2006) contributes a rather full picture of how a software-pricing model is formed (see Figure 1). A software-licensing model is a combination of various attributes which can be divided into six groups. They are license options, license terms, installation types, payment methods, terms and compliance, and product flexibility. As mentioned in 2.5.3, income streams of software enterprises are divided equally from three sources such as software products, maintenance, and supporting services. Thus, Nayak's model (2006) is still missing an important element – what is the product or service for sales. Steele's model (2003) supplements to Nayak's model (see Figure 2), Steele analyses software-licensing models in three dimensions: what is sold, pricing policy, and time frame. The pricing policy can be determined on different assessment bases, such as those are dependent on usage (per use) and those are independent on usage (per site, per CPU, and per user).

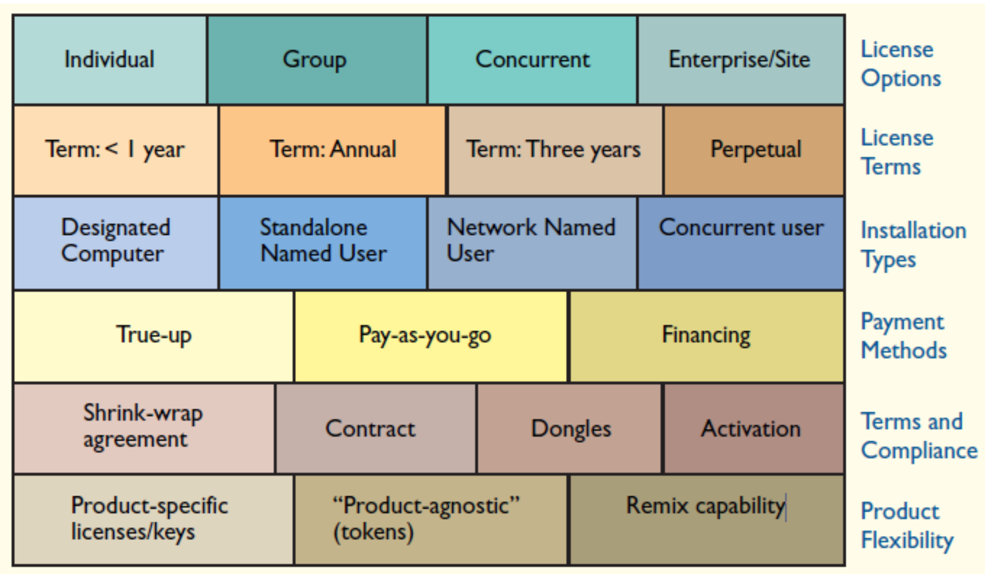

Figure 1: Attributes of software licensing (Nayak 2006)

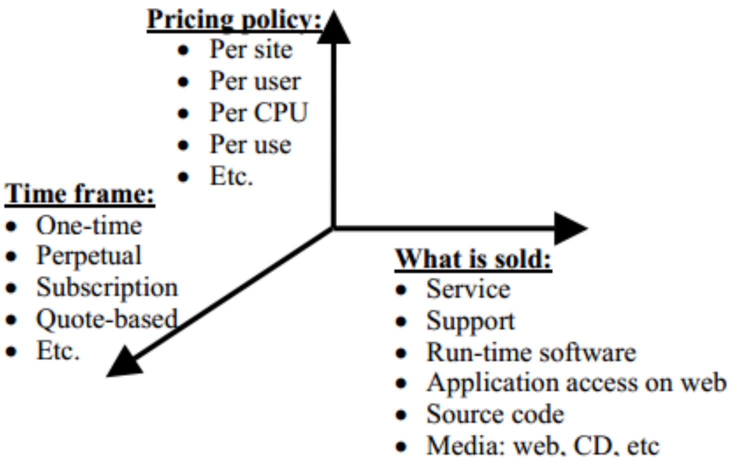

Figure 2: Dimensions of software licensing (Steele 2003)

A new model, which is presented in Table 4, is a hybrid of Nayak’s (2006) and Steele’s (2003) models with an attempt to create a fairly complete framework of how a software-pricing model is constructed. Additionally, the elements in Table 4 are intentionally chosen in accordance with Viope’s product characteristics. Some of the elements mentioned in Nayak’s model are eliminated because it is not relevant for the case company. For example, the “installation types” attribute is not mentioned because Viope's product does not require installations.

What is sold	License options	License terms	Payment methods
Service Support Run-time software Application access on web Source code	Individual Group Concurrent Enterprise/ Site Subscription Trial	Perceptual Fixed-term	Up-front True-up Pay as you go Financing

Table 4: Attributes of software pricing (Nayak (2006) and Steele (2003))

2.6.1 What is sold

Cusumano (2003) distinguishes software businesses into product companies and service companies. Product companies merely provide software products not services. The software products are in different forms such as run-time software, application access on web, and source code. Software service companies’ focus is on services such as support, maintenance, training, and technical consulting that complement to related software products provided by them or another company.

2.6.2 License options

They are numerous ways to license a software product. Individual, group, concurrent, enterprise (site), trial, subscription and free trial are the common ones.

Individual licenses, also known as named-user licenses, are granted to specific end-users. There are no usage limits in this type of licensing. However, it only allows one-time access from the users with the granted permission, not concurrent access. (Bontis & Chung 2000; Tseng n.d.) Similarly, a group license is assigned to named users belong to a registered group. There is a limit in the number of users in the group. (Nayak 2006; Tseng n.d.)

Concurrent licenses, also referred to as floating licenses or network licenses, are priced based on a high watermark – the maximum number of users could use the software simultaneously (Bontis & Chung 2000; Nayak 2006). Ferrante (2006) claims that concurrent licensing provides flexibility; therefore it is common in large enterprises.

An enterprise or site license restricts the use of a software product within a defined location. When the users are out of the set location, the software is inaccessible. (Tseng n.d.; Nayak 2006)

A subscription often contains software, maintenance, and automatic upgrade and is set for a fixed period of time (Ferrante 2006). The common duration of a subscription is one month or one year, and requires monthly or annual renewal for the continuity (Ferrante 2006). The advantage of this model is that it provides customers the possibility to pay in instalments spreading over time rather than an upfront payment paid at once (O'Connor 2009). However, it might be challenging for software-as-a-service model because it requires the providers to predict the right usage level to offer price and service access at a rational level (O'Connor 2009).

In contrast to the other license options, trial licensing are often free of charge with the purpose of providing user experience. Free trial is often valid within thirty to sixty days and does not include support services. After the trial period, the software is disabled and requires payment to continue using. (Ferrante 2006)

There is much research indicates key trends in software pricing. Some of the prevalent software pricing models are perceptual, concurrent user, subscription, site, and utility-based (pay-per-use) (Ferrante 2006; IDC 2012; Steele 2003; Cusumano 2007; Bontis & Chung 2000). While perceptual licensing is still dominating the market and is customers' most favourite, usage-based and subscription-based pricing are becoming more popular (Nayak 2006; Konary, Graham & Seymour 2004). As a result, there is a significant transition in software payment methods from up-front to periodic (PricewaterhouseCoopers 2007). The change in pricing schemes of Microsoft Office products is a good example of this trend. Microsoft has shifted from perceptual to subscription-based pricing with annual and monthly payment options for its recent launched Microsoft Office 365 products.

2.6.3 License terms

Another attribute of software licensing is license terms, which can be either permanent or fixed term. In perceptual licensing model, a software program is purchased permanently without expiration dates (Lehmann & Buxmann 2009). This is currently the most common licensing model used in the market (Nayak 2006; Konary, Graham & Seymour 2004).

On the contrary, fixed term licensing is offered within a period of time which is defined in the agreement. Subscription-based licensing is a well-known form of fixed term licensing. The common license terms are one month, one year, three years, and five years. After the contract time, the agreement is terminated and the software is disabled. (Nayak 2006; Ferrante 2006)

2.6.4 Payment methods

According to Lehmann and Buxmann (2009), there are two types of payment methods: single payment and recurring payment. The single payment method is often known as up-front payment, which requires customers to pay at once beforehand to acquire temporary or perceptual rights for using the software. This method is relatively popular in the software business nowadays (Lehmann and Buxmann 2009). For recurring payment methods, there are in different forms such as true-up, pay-as-you-go, and financing (Nayak 2006).

True-up payment method offers flexibility for buyers to add more licenses into a purchased license package in order to acquire volume discounts. Another form of true-up payment is when customers need to upgrade the already purchased product, they only have to pay for the difference between two versions' prices. (Nayak 2006)

Pay-as-you-go method takes the usage amount into account when pricing a software product (Nayak 2006). The software is charged for each "use" which is described in the contract (Ferrante 20006). The use is measured based on, for instance, CPU use (Tseng n.d.).

Financing allows buyers to pay for products in instalments within a certain period of time. However, the buyers often have to pay interest on top of the product's price. (Nayak 2006)

Lehmann and Buxmann (2009) mention that single payment and recurring payment could be combined. For instance, a software product is sold together with a maintenance agreement. An up-front fee is charged for the software while a fixed percentage of the software price is charged annually for the maintenance service. This strategy helps to remain a rather stable income stream for the company.

3 Case study – Viope Solutions Oy

The empirical part of this thesis is conducted for Viope Solutions Oy, a Finnish software company. Viope is established in 2001. The company provides eLearning software products and services for educational institutions. Due to the saturation in the domestic market, the company has taken the steps to go international since 2011. In addition to the internationalisation, in Fall 2013 its products and services will be upgraded in order to serve a wider range of customers and enter to new markets. This product upgrade also comes with a new marketing strategy in which pricing structure is an important element.

The purpose of this chapter is to create a direction for Viope to develop its pricing structure for future changes in its products and markets.

3.1 Methodology

This thesis is a single case study with a qualitative research approach. Primary data is mainly collected through the author's observations while working at Viope. Additionally, semi-structured interviews with the company's Chief Executive Officer (CEO) are also conducted to gather reliable data. In semi-structured interviews, topics and questions are prepared beforehand, even though some questions might be skipped or added during the interviews based on situations. Semi-structured is a hybrid of structured interviews – all questions are listed and strictly followed - and in-depth interviews – no questions are predetermined (Saunders, Lewis & Thornhill 2009, 320-1). The study also uses secondary data which is gathered and compiled from multiple sources such annual reports and articles.

Eventually, all the collected qualitative data is analysed using grid analysis technique. This technique is a suitable tool for making decisions when there are many alternatives to choose from and many factors to consider.

Taking into account the sensitivity of the thesis topic and the confidentiality of the information, some of the primary data is changed purposely in this published version of the thesis.

3.2 Learning Management System market and key players

Learning management system (LMS) business is considerably competitive and has recently undergone market transition. Bersin & Associates study (2012) estimates that global spending on LMS for both training and educating purposes in 2013 is US$ 1,8 to US$ 1,9 billion. The global market involves more than 500 providers among which there are certain key players (see Figure 3). Blackboard Inc. with commercial platforms and Moodle is an open source LMS – are among those most well known companies in the global education sector. Campus Computing (2010) reports that as of 2011 Blackboard obtains 57,1% while Moodle holds 16,4% market share in the U.S. higher education. It also mentions that from the period 2006 to 2010, commercial LMS enterprises lost market share to open source LMS companies. As a proof of this trend, in a press release, Blackboard announced the support of open source model as acquiring Moodlerooms and NetSpot, two leading providers of open source LMS services, notwithstanding being a direct competitor of Moodle. (Blackboard Inc. 2012)

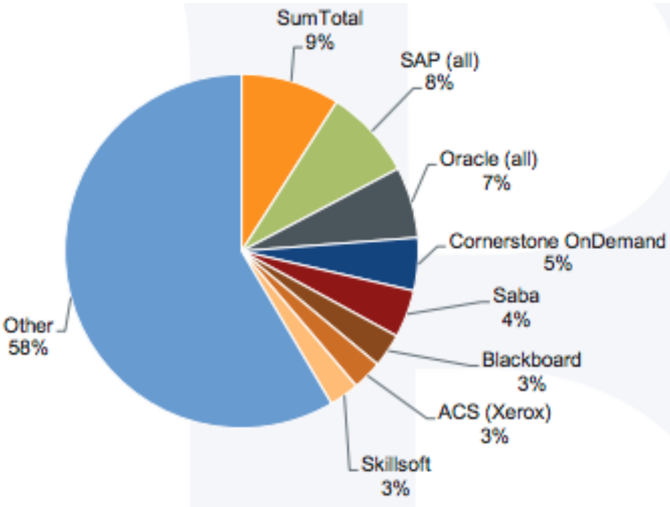

Figure 3: Projected global LMS market share in 2013 (Bersin & Associates 2012)

3.2.1 Blackboard's pricing model

Blackboard's pricing model is not officially published; therefore research on its pricing strategies is grounded on articles, Blackboard Inc.'s annual reports, and experts' analyses.

Blackboard currently owns seven product lines serving different educational levels. The company focuses on selling campus-wide access to platforms. The main product is Blackboard Learn which is an online learning platform. Other products are often sold as extensions of Blackboard Learn (see Table 5).

Flat pricing is the pricing scheme of Blackboard Learn. Trotter (2008) reveals that the price offerings vary depending on many factors, such as student enrolments, the number of courses, and services included. Blackboard also uses product versioning as a price segmentation fence. The platforms have different versions with different pricing levels based on size of institutions (Blackboard Inc. Form 10-K 2011). For instance, for small organisations, a standard version starts at $10 000 as an annual flat fee, including hosting and training with unlimited number of courses. For larger districts or higher education institutions, Blackboard's Academic Suite - a comprehensive eLearning platform is offered with annual fees ranging from $25 000 to $75 000 (Trotter 2008).

Their pricing strategy amplifies the expansion of each sales deal. They stimulate multiyear commitment by offering discounts (Blackboard Inc. Form-10K 2011). They attempt to expand the purchase of one product to multiple products in their product line. Feldstein (2006) claims that Blackboard could remain profitable while the costs of selling are high because they focus on selling related products to existing customers instead of trying to find new customers. In addition, they provide umbrella pricing and contractual terms to state and regional agreements. These types of agreements involve numerous institutions but are decided by one state or regional authority (Blackboard Inc. Form 10-K 2011).

Blackboard also uses offer-bundling strategy. Farmer (2006) notes both maintenance and licensing fees are inclusive in the final price. The annual maintenance fee has been increased from 10% of the final price in the late 1960s and early 1970s to more than 15% in 2006. Besides the main flat fees, 7,75% of the company's total revenue in 2010 also comes from its professional services such as managed hosting, training, consulting, strategic services, and student services (Blackboard Inc. Form 10-K 2011). The service fees are not inclusive in the product prices.

Product	Licensing model	Segmentation
Blackboard Learn (5 modules)		All segments
(1) Course Delivery Module	Foundation license: - entry-level versions for small-scale clients Enterprise license: - large and advanced level, various language configurations - includes module (5)	
(2) Course Engagement Module	Extension of (1)	
(3) Content Management Module	Extension of (1) and (2)	
(4) Portfolio Management Module	Extension of (3)	
(5) Outcome Assessment Module	Extension of (1), (2), and (3) Inclusive in Enterprise module (1)	
Blackboard Transact Hardware: servers, ID/stored-value cards, card readers, and point-of-sale devices	Bundle with hardware devices, separately and in packages	U.S. and Canadian postsecondary
Blackboard Connect	Extension of Blackboard Learn Per student pricing, term 1 to 3 years, discounts for multi year commitment	U.S. K-12, postsecondary, government
Blackboard Mobile, 2 versions: (a) Blackboard Mobile Central (b) Blackboard Mobile Learn	 Enterprise-wise license Personal License: $1,99/ year or $5,99 for life	U.S. postsecondary and K-12
Blackboard Analytics	(unknown)	U.S. postsecondary
Blackboard Collaborate	Annual flat fees for 1 to 3 years, based on size of departments or institutions, with discounts for multiyear contracts	U.S. and Canadian postsecondary and K-12
Blackboard Engage	(unknown)	U.S. K-12

Table 5: Blackboard products pricing model (Blackboard Inc. Form 10-K 2011)

3.2.2 Moodle service providers' pricing models

Moodle platform is not without costs despite it is open source. Those costs include facilities, hosting, and developers to set up and maintain the hardware and software, as well as teacher training. Alternatively, these necessities can be outsourced by service providers such as Moodlerooms and Remote-Learner. Moodlerooms, the second largest Moodle host, uses annual per-user pricing scheme with three levels of host services US$1/student, US$3/student, and US$5/student determined by user blocks, storage, and bandwidth (Farmer 2012; Saner 2008). Additionally, services, training, and required features are also factors influencing the price, for instance the US$3 and US$5 plans include plugins for integration with other programs (Moodlerooms; Saner 2008). Table 6, which is provided by Saner (2008), presents Moodlerooms' pricing model for hosting service published in 2008. At the time this thesis is conducted, Moodlerooms does not publish its pricing details in the company's website.

Annual Cost	Accounts	Storage	Bandwidth
$ 1/student	Blocks of 500	2.5 GB/block	50 GB/month
$ 3/student	Blocks of 500	10 GB/block	200 GB/month
$ 5/student	Blocks of 500	30 GB/block	600 GB/month
$ Call	Large institutions	-	-

Table 6: Moodlerooms' pricing table (Saner 2008)

Remote-Learner uses annual concurrent pricing model based on the size of schools or organisations. As this is a hosting service, storage capacity is also an important element in price determination. It is simpler than Moodlerooms' pricing table as it does not consider bandwidth limits. Table 7 demonstrates Remote-Learner pricing scheme, provided by Saner (2008)

Annual Cost	Accounts	Storage	Bandwidth
$ 795	< 100	1 Gb	-
$ 1,500	"several hundred"	12 GB	-
$ 2,500	~ 3,000	25 GB	-
$ 4,000	~ 4,000	40 GB	-
$ 9,000	~ 10,000	500 GB	Dedicated server "hundreds of courses"
$ 20,000	~ 25,000	500 GB	Dedicated servers "thousands of courses"

Table 7: Remote-Learner's pricing table (Saner 2008)

The companies also offer other support and training services. Services are often charged per seat pricing or a flat fee for groups. (Remote-Learner n.d.; Moodlerooms n.d.). Table 8 presents pricing schemes of services offered by the companies.

	Serivce	Pricing
Remote-Learner	Online-training programs	Per seat, ranging from $305 - $625
	Onsite-training programs	Flat fee
	- group of teachers	$5 995 for 2 days, travel expenses inclusive
	- administrators	$3 995 for 1 day, travel expenses inclusive
Moodlerooms	Online training	Per seat, ranging from $99 - $500
	Webinar courses	Per seat, ranging from $100- $125, 1,5 – 3 hours
	On-site training	$2 500 - 4 000, 1 - 2 days, up to 15 people

Table 8: Remote-Learner and Moodlerooms training serivces pricing

3.3 Viope's products and customers

Viope provides eLearning solutions mainly in programming topic. The main product is Viope eLearning platform often delivered with ready-made programming course materials. The company follows the SaaS model, which means the software product is accessible via Internet with a web browser. This cloud-based service tends to allow users to access the service without the limitations of time and location. By Fall 2013, a new line of product – eLearning platform for Mathematics will be introduced to the market. With the new launch, Viope attempts to broaden its market segment and to serve more customers in the new field. Besides the main software product, Viope also provides additional services such as product training and system integrations.

The current Viope eLearning platform is a specialised product with its market niche is computer science or information technology department at higher education institutions. However, in the near future, the company aim to diversify its customer base. The users primarily are teachers and students. Due to the budgeting and operation processes of this customer group, which is organisations' budgets and teaching materials are compiled annually, product purchases made with Viope are also repeated yearly.

3.4 Direction to establish Viope's pricing structure

A direction how to establish Viope’s pricing structure is created based reviewed literature, competitors' analyses, and Viope's business scenario. This section will explain how Viope could apply price segmentation, versioning and bundling to establish its pricing structure. A method of how to select a pricing model for its main product, Viope World learning platform, will be also introduced.

3.4.1 Price segmentation

The number of students is the primary factor influencing the final prices of Viope products and services. Thus, Viope could use purchase quantity, specifically the purchase of student licenses, as a price segmentation fence. The larger the number of students using the products, the cheaper the price per license becomes. This will likely encourage schools to widen their use of the products, thus increase the sales deal.

In addition to purchase quantity, segmenting by purchase location is recommended when Viope sells services globally. It is a fact that pricing level significantly varies between countries and continents. Viope’s current prices in Europe could be considered as a standard price. When the services are sold in other regions, for example, developing countries, it is recommended to lower the prices to be suitable for the local pricing levels. This is one of the crucial aspects to be considered carefully in the internationalisation strategy.

3.4.2 Versioning

A new version of Viope World learning platform is going to have numerous new features that could serve wider range of customers with various teaching subjects. This is why it makes sense to version their product into three levels so as to suit the users' purposes best.

The first level is basic use version. This version could include basic features that serve general purpose of use rather than being specialised in certain subjects, such as managing online classes.

The second version with features and exclusive technology serves one defined subject. For example, customers can choose certain specialised features that support either programming or mathematics. With this version, it could segment customers who only use the product for a certain subject from those who need it for campus-wide use.

The third level is the optimal version which has all available premium and advanced features. This version targets to customers who look for campus-wide use and intensively use the platform with a wide usage range in terms of users and subjects. These customers, therefore, often highly perceive the value of the product.

3.4.3 Bundling

Customised-bundling is recommended for Viope since currently there are multiple related products and services in its product line. For example, a university that is interested in programming topic can choose a bundle of Viope platform with specialised features for programming, ready-made programming course materials, and on-site product training service. This offers customers flexibility to combine products and services that match their needs into one package with one price offering. Products and services in one bundle could help to increase the realised value of the products and services in terms of benefits to customers. For instance, the ready-made course materials and training service help customers to start using Viope platform conveniently without too much time consuming and efforts. Moreover, it helps to simplify administration and billing processes since customers only need to handle one contract for multiple services and products.

3.4.4 Selecting a pricing model for Viope

Considering Viope's products and its customers as well as the benchmark in the LMS industry (section 3.2), there are three suitable pricing models chosen out of numerous models, namely, per user, subscription-based, and flat fee pricing. Table 9 represents the alignment of these three pricing models with business contextual factors. These factors are mentioned in Ojala’s (2013) research regarding choosing a revenue model for software as a service.

Ojala (2013) claims that user organisation size is important when determining a price model. Larger organisations often have more resources and tend to take tighter control over service licenses, especially if the service is essential for critical operation processes. On the contrary, small or medium-sized organisations likely have limited resources. That is why they prefer low and short-term investments, so per user pricing is the best match in this case.

Regarding customer needs such as customization possibility, flat fee pricing is the most suitable. Subscription-based and flat fee pricing should be the choices when it requires transparent clarifications in costs of the services. This is because these models do not have hidden costs or cost accumulation by usage. Per user pricing offers the best ease of use because services provided with this pricing model are likely available online so that customers can make the purchase whenever they want. (Ojala 2013)

Factor	Per user	Subscription	Flat fee
The customer is a large organisation	Low	Medium	High
The customer is a small or medium-sized organisation	High	Medium	Low
The target segment for the software is narrow	Low	Medium	High
The target segment for the software is broad	High	Medium	Low
There is a risk of piracy or misuse of a software license	High	Medium	Medium
Software needed for critical operation process	Low	Medium	High
Software needed for occasional use	High	Medium	Low
Limited resources to purchase the software	High	Medium	Low
Need to customize the software	Low	Medium	High
Full and detailed evaluation of the software costs	Low	High	High
Ease of use	High	Medium	Low

Table 9: The alignment of pricing models with business contexts (Ojala 2013)

An interview is conducted with the CEO of Viope to determine which of the aforementioned criteria and factors are relevant to the Viope's business scenario in the near future. Viope will aim to serve large organisations instead of small or medium-sized ones. The company also aims to diversify its target segments. Viope's services are considered essential for core operation processes rather than occasional use. In addition to this, its customers often do not have limited resources to purchase their services. The risk of piracy or misuse of the service licenses exists albeit is rather low. It is in fact necessary for its customers to obtain fully detailed evaluation of the services' costs. (Lackman 2013. Personal communication.)

Table 10 illustrates grid analysis that shows weighted assessment of how each pricing model satisfied the criteria and factors defined by Mr Lackman. He assessed the importance of each criterion and graded it from 1 to 5, in which 5 is the most important. However, the points have been changed purposely from the interviewee's decision without any specific rule due to confidential factor. The pricing models are then scored from 1 to 5, in which 5 is the best match with the criteria. The pricing model that has the highest score is the most suitable one for the company when taking these factors into consideration.

Criteria Grid	Options	Pay per user		Subscription		Flat fee	
Criteria	Criteria's importance	Score	Subtotal	Score	Subtotal	Score	Subtotal
Ease of use	5	5	25	3	15	4	20
Diversify customer base	4	5	20	3	12	0	0
Make software piracy impossible	1	5	5	2	2	0	0
Flexible	4	5	20	3	12	1	4
Increase profit when customer remains loyal	3	1	3	4	12	5	15
Negotiable	2	0	0	3	6	4	8
Transparent	3	0	0	4	12	5	15
Support the growth of user base	5	1	5	2	10	5	25
Suitable when service is needed for a long period	1	0	0	1	1	5	5
Suitable for critical operation process	5	0	0	2	10	5	25
Suitable for large organisations	2	0	0	2	4	5	10
Totals			**78**		**96**		**127**
Scales Importance: 5 = most important Score: 5 = best match							

Table 10: Grid analysis

Through the grid analysis, flat-fee pricing model appears to be the best match with the highest total score. This result might be different than in the real analysis because the points have been changed. Flat-fee pricing in general satisfies the set of criteria in relation to their importance. This model helps to increase profit when customers remain loyal because it works well when the service is needed for a long period. It is also transparent because it does not generate extra operating costs during a contract period. Flat-fee pricing encourages customers to intensively use the service without carefully predicting the number of users; therefore it supports the growth of user base. Most importantly, it is suitable for core operation process and large organisations while provides the ease of use for both sellers and customers. The downsides of this model are, first, it does not support to diversify the customer base; second, it does not provide flexibility when a customer wants to discontinue using the service without losing initial investment or cannot change the number of users when needed.

4 Conclusions

The objective of this study was to develop an adaptive direction to design a pricing structure for Viope Solutions Oy. In order to achieve the objective, background information regarding elements and factors in pricing structures as well as Viope's business objectives are crucial.

This thesis first explored what is contained in a pricing structure for software products. According to the literature, a pricing structure development includes the unit definition, price determination, price segmentation, versioning, and bundling. In general, when establishing a pricing structure, it is crucial to understand what the value-drivers to customers are and how these values could be captured in a pricing structure. It has been proven that there is heterogeneity in customers' value perception due to different factors, such as using purposes, needs, and price sensitivity. A profitable pricing structure is a combination of these five attributes, which can present the alignment of the product's value with customer needs.

This thesis also presented how a software pricing model is formed. A software pricing model is often constructed by four elements which are what is sold, license options, license terms, and payment methods. Much research mentions that there have been new trends in the software industry in terms of pricing models and revenue streams. For instance, nowadays a large proportion of many software companies' revenues are coming from support and maintenance service sales rather than software sales. Companies tend to offer more supporting services along with their software products. Due to the revolution of the Internet, the industry also has significantly shifted from permanent software licensing such as perceptual licensing to software rental such as subscription-based pricing.

Based on the theoretical background, the market benchmark as well as Viope's products, customers, and internationalisation plan, an adaptive guidance to design its pricing structure was developed in section 3.4 .The guidance includes four elements: how to segment its customers, how to version its products, how to bundle its offerings, and how to select a suitable pricing model.

In order to select a pricing model for Viope, the author first explored what are the most prevalent and relevant models are used in this industry. The two biggest market players, the Blackboard and Moodle service providers, were chosen to provide a more practical and realistic view in pricing eLearning products and services. This has shown that per-user, subscription-based, and flat-fee pricing are the three most common models in this field. Each model was analysed in terms of how well it could perform in different business contexts and buyer situations. A grid analysis technique was conducted to select the most suitable pricing model for Viope. The analysis was based on a set of criteria which were determined and assessed by Viope's CEO. The assessment points, however, were changed purposely from the CEO's actual decision with the attempt to protect the confidentiality of the information. As a result, the flat fee pricing is the most suitable model for Viope because on average it satisfies the combination of chosen criteria.

Table 11 summarises the direction to establish Viope's pricing structure.

Parameter	How it works
Price segmentation	by purchase quantity by purchase location
Versioning	1. Basic version: serves basic use, such as managing classes 2. Standard version with exclusive features for one subject: serves intensive use of one chosen subject 3. Premium version with premium features for campus-wide use: serves intensive use of all subjects
Bundling	Mixed-bundling: customers choose several products and services to buy with one price
Pricing model	Flat-fee pricing

Table 11: Summary of Viope's pricing structure

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Appendices

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Appendix 1 Interview with Viope Solutions Oy

1. Are you customers large or small/ medium-size organisations?
2. Is the target segment for your service narrow or broad?
3. Is there high risk of piracy or misuse of your service licenses?
4. Is your service needed for critical operation processes or for occasional use?
5. Do your customers have limited resources for purchase your service?
6. Do your customers need full and detailed evaluation of the service costs?
7. Is the ease of use of the pricing model important for you?